

CD0603/1005 Schottky Barrier Chip Diode Series

BOURNS®

Absolute Ratings (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD0603-B00340	CD0603-B0130L	CD0603-B0140L	CD0603-B0140R	CD0603-B0230	CD0603-B0240	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	35	45	45	35	45	V
Reverse Voltage	V_R	40	30	40	40	30	40	V
Average Forward Current	I_O	30	100	100	100	200	200	mA
Forward Current, Surge Peak	I_{surge}	500*	1000*	1000*	1000*	2000*	2000*	mA
Power Dissipation	PD		150					mW
Storage Temperature	T_{STG}		-40 to +125					$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125					$^\circ\text{C}$

Parameter	Symbol	CD1005-B00340	CD1005-B0130L	CD1005-B0140L	CD1005-B0140R	CD1005-B0230	CD1005-B0240	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	35	45	45	35	45	V
Reverse Voltage	V_R	40	30	40	40	30	40	V
Average Forward Current	I_O	30	100	100	100	200	200	mA
Forward Current, Surge Peak	I_{surge}	500*	1000*	1000*	1000*	3000*	3000*	mA
Power Dissipation	PD	200	250	250	250	250	250	mW
Storage Temperature	T_{STG}		-40 to +125					$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125					$^\circ\text{C}$

* Condition: 8.3 ms single half sine-wave superimposed on rate load (JEDEC method).

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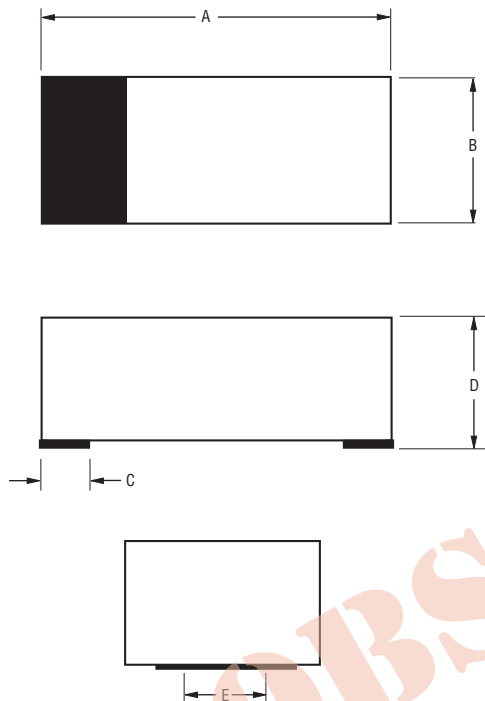
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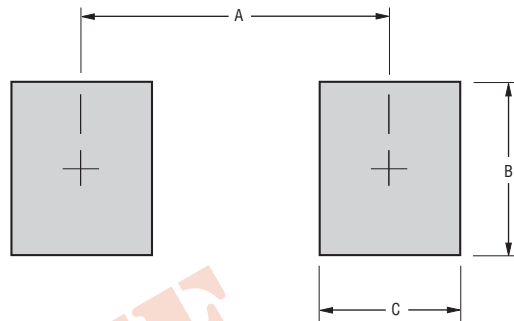
Product Dimensions



Dimension	0603	1005
A	$\frac{1.60 - 1.80}{(0.063 - 0.071)}$	$\frac{2.40 - 2.60}{(0.095 - 0.102)}$
B	$\frac{0.80 - 1.00}{(0.031 - 0.039)}$	$\frac{1.10 - 1.30}{(0.043 - 0.051)}$
C	$\frac{0.45}{(0.018)}$ Typ.	$\frac{0.50}{(0.020)}$ Typ.
D	$\frac{0.70 - 0.85}{(0.027 - 0.033)}$	$\frac{0.70 - 0.90}{(0.027 - 0.035)}$
E	$\frac{0.70}{(0.028)}$ Typ.	$\frac{1.00}{(0.039)}$ Typ.

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Recommended Pad Layout



Dimension	0603	1005
A (Max.)	$\frac{1.25}{(0.049)}$	$\frac{2.00}{(0.079)}$
B (Min.)	$\frac{1.00}{(0.039)}$	$\frac{1.3}{(0.051)}$
C (Min.)	$\frac{0.6}{(0.024)}$	$\frac{0.7}{(0.028)}$

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Physical Specifications

Case0603(1608) / 1005(2512) Molded plastic
 Terminals.....Gold plated, solderable per MIL-STD-750,
 Method 2026
 PolarityIndicated by cathode band
 Mounting PositionAny
 Weight0.000159 ounces / 0.0045 grams

Typical Part Marking

CDxxxx-B00340B2
 CDxxxx-B0130LB3
 CDxxxx-B0140LB8
 CDxxxx-B0140R.....B9
 CDxxxx-B0230B5
 CDxxxx-B0240B7

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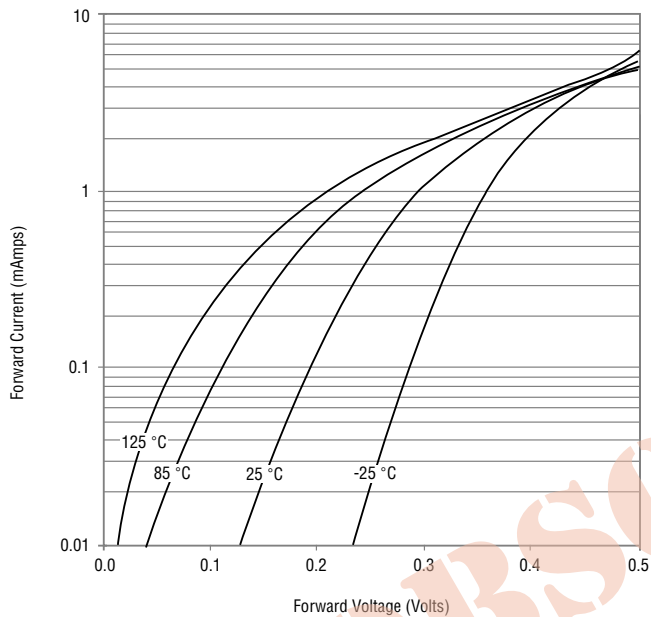
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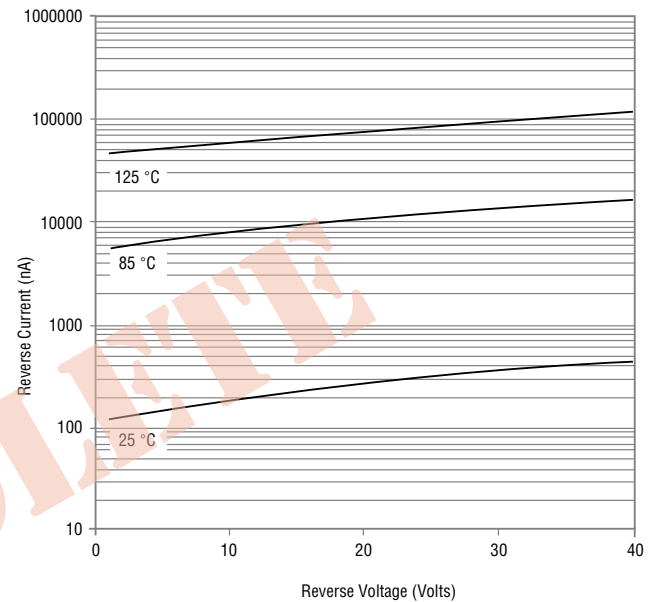
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Rating and Characteristic Curves: CDxxx-B00340

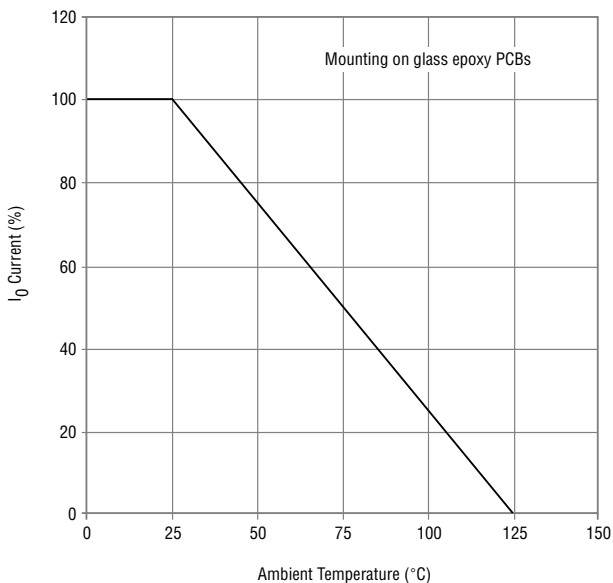
Forward Characteristics



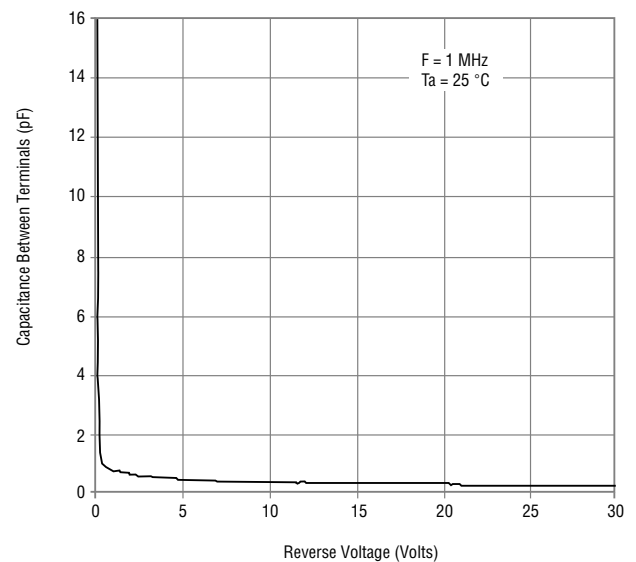
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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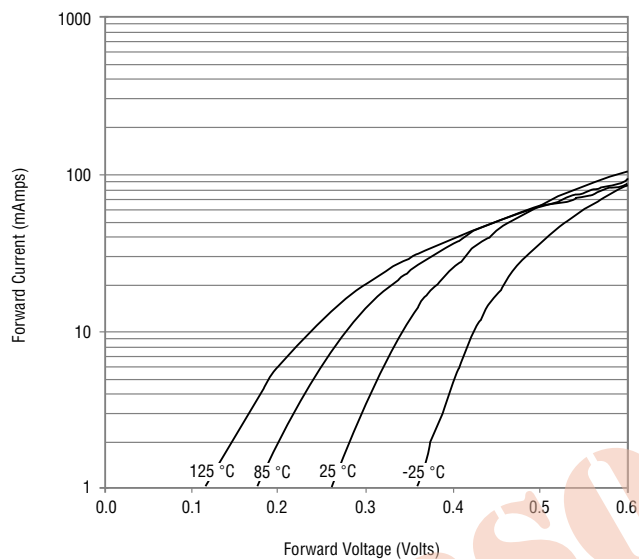
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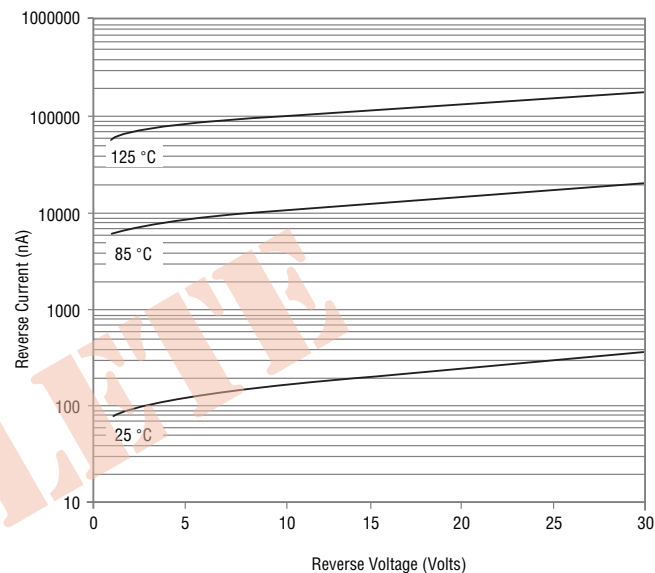
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Rating and Characteristic Curves: CDxxxx-B0130L

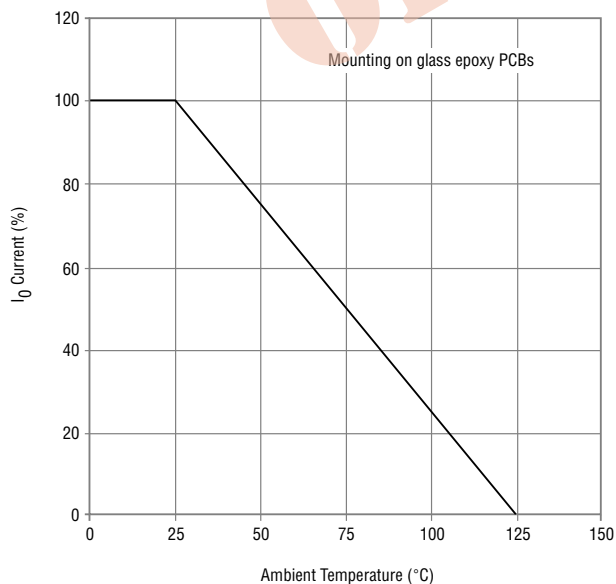
Forward Characteristics



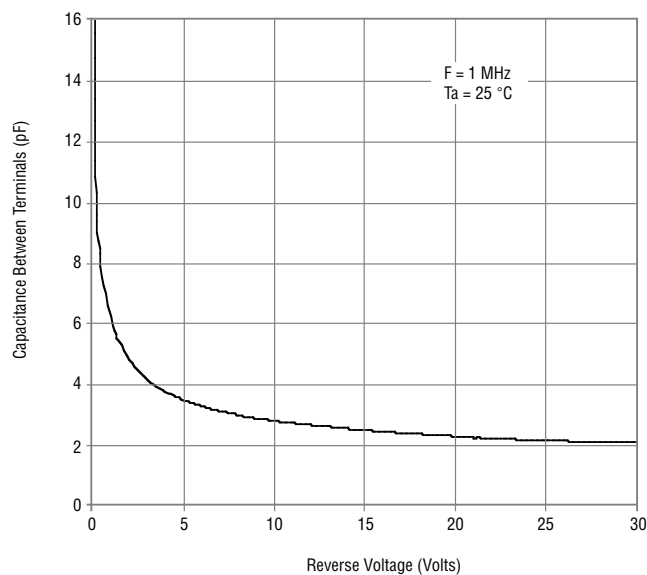
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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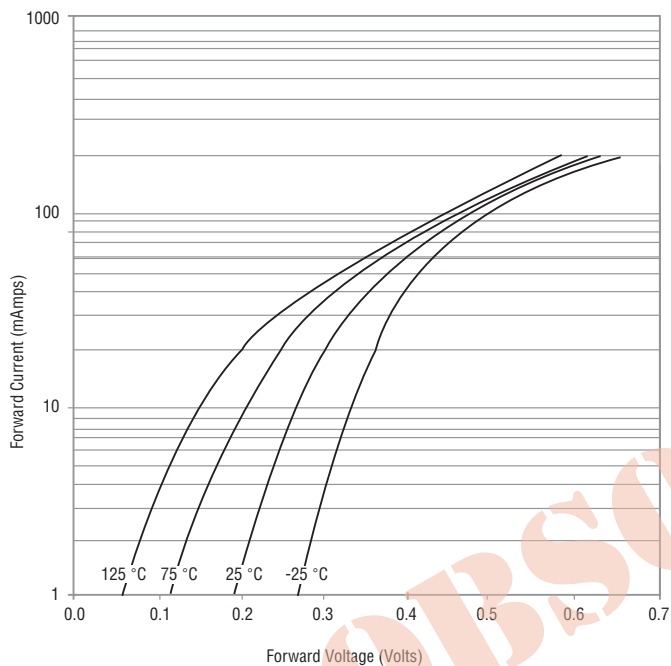
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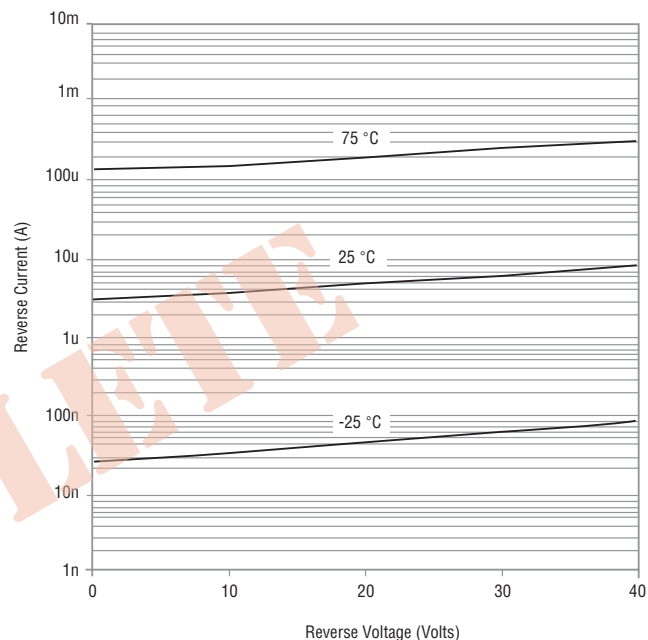
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Rating and Characteristic Curves: CDxxxx-B0140L

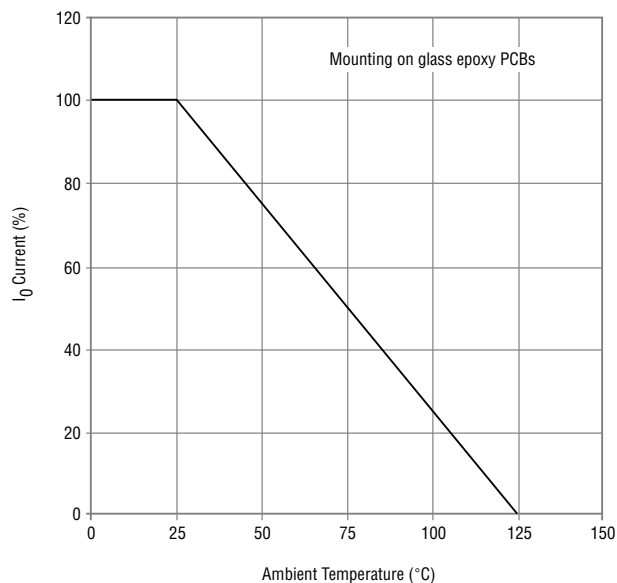
Forward Characteristics



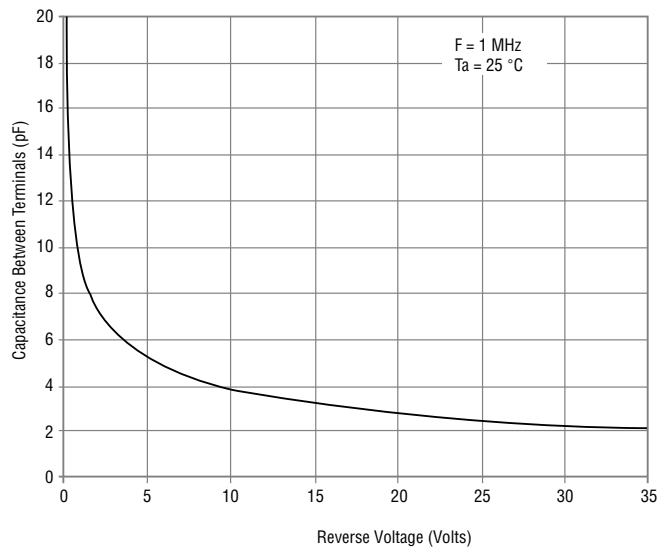
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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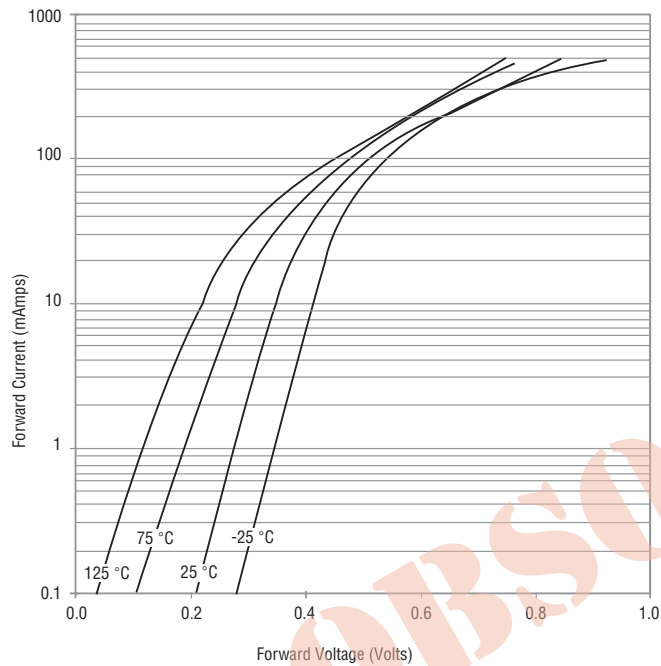
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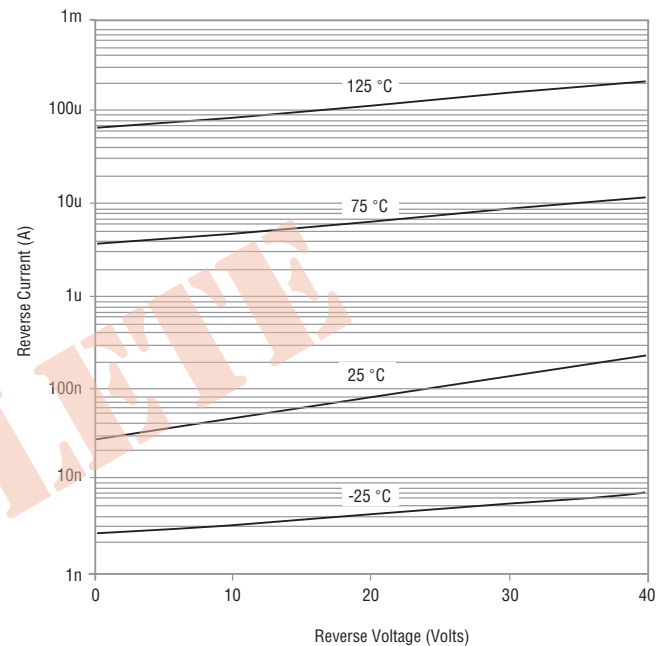
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Rating and Characteristic Curves: CDxxxx-B0140R

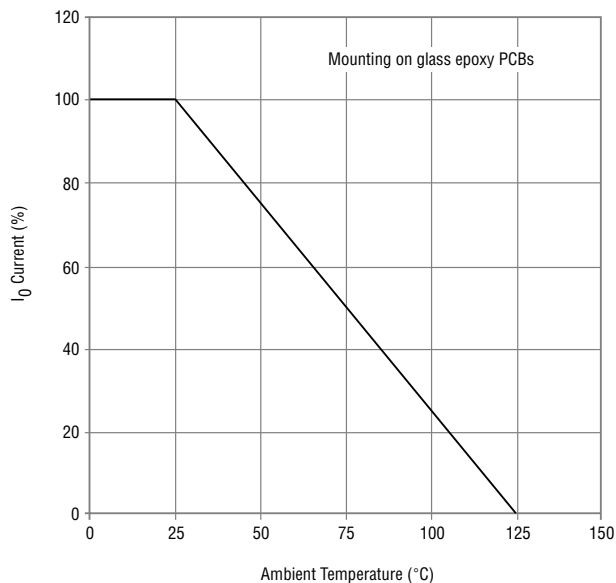
Forward Characteristics



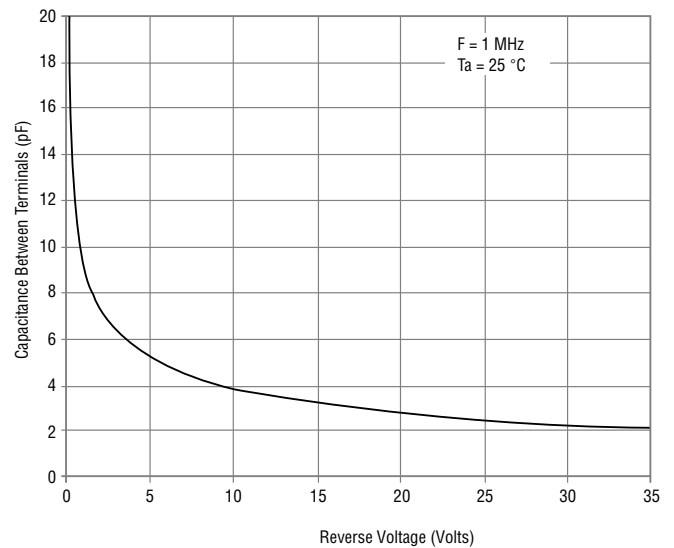
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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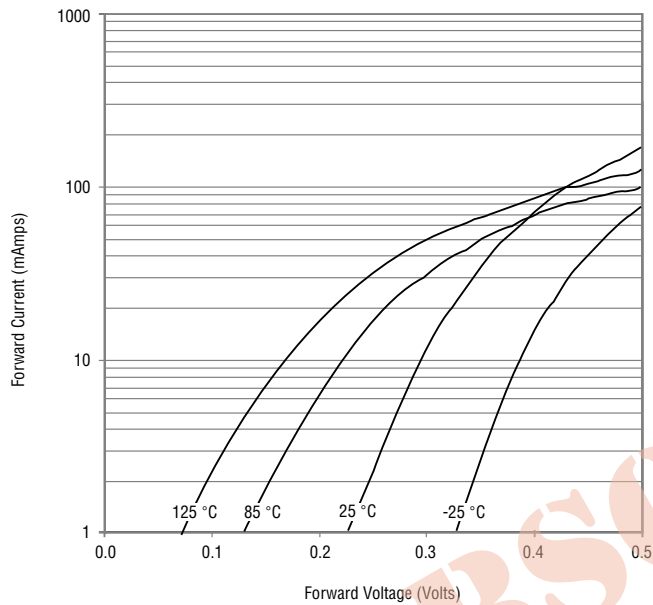
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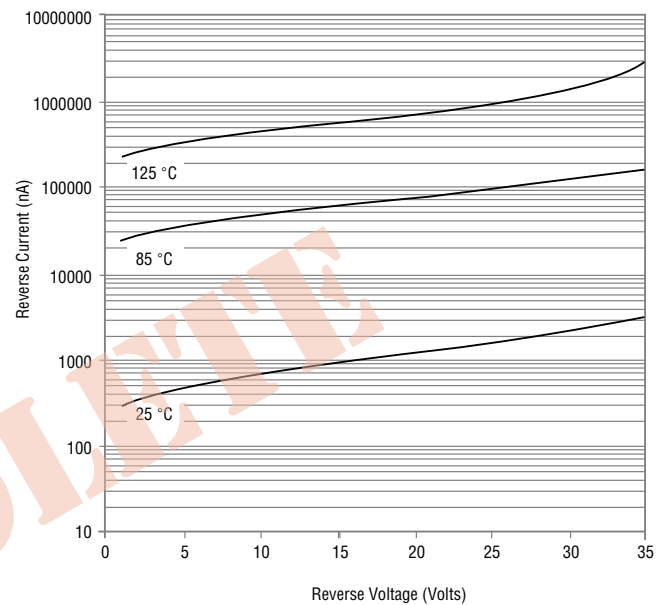
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Rating and Characteristic Curves: CDxxx-B0230

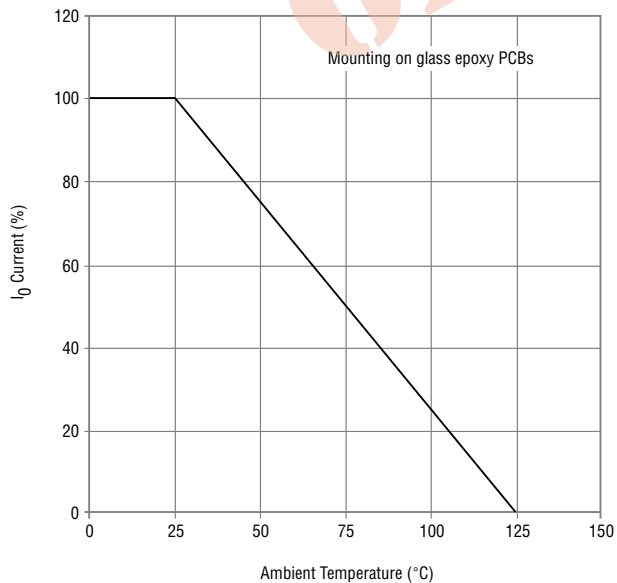
Forward Characteristics



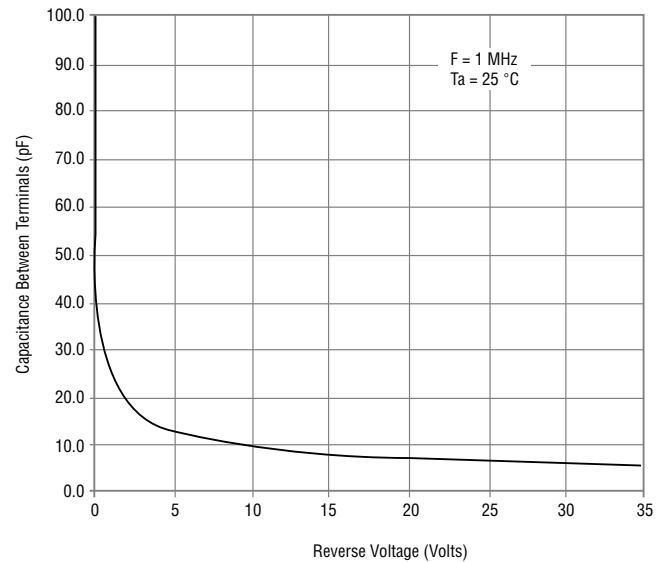
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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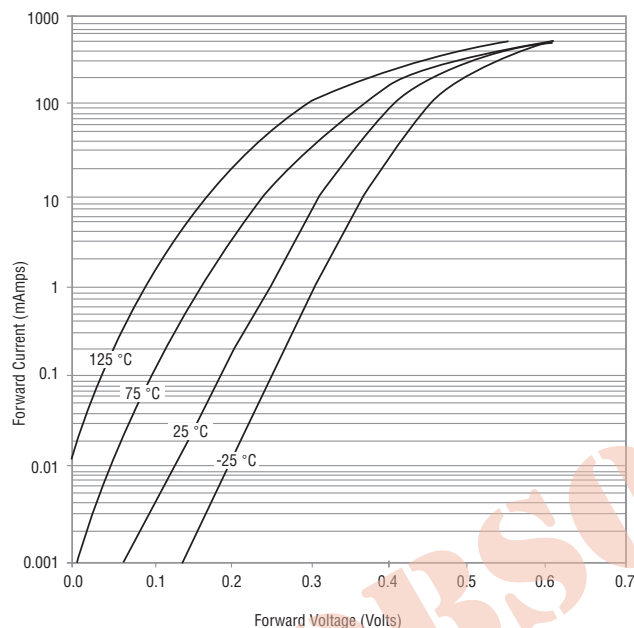
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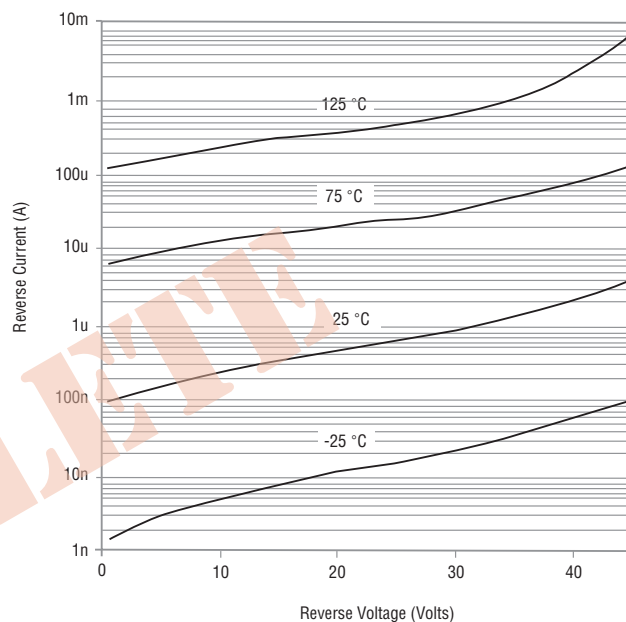
BOURNS®

Rating and Characteristic Curves: CDxxxx-B0240

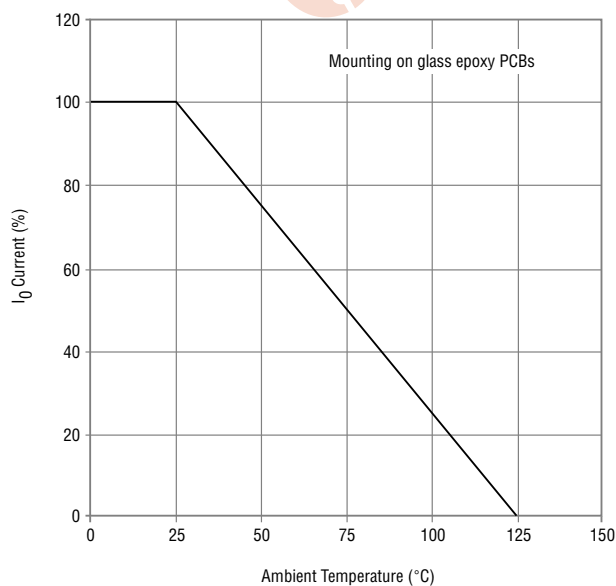
Forward Characteristics



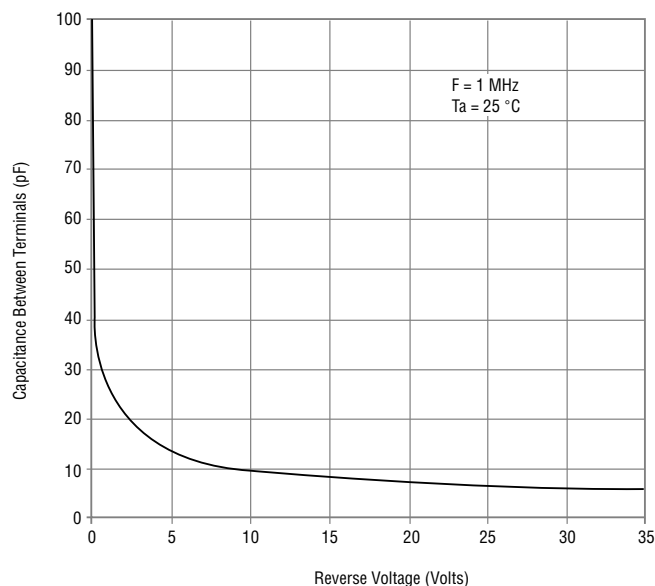
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



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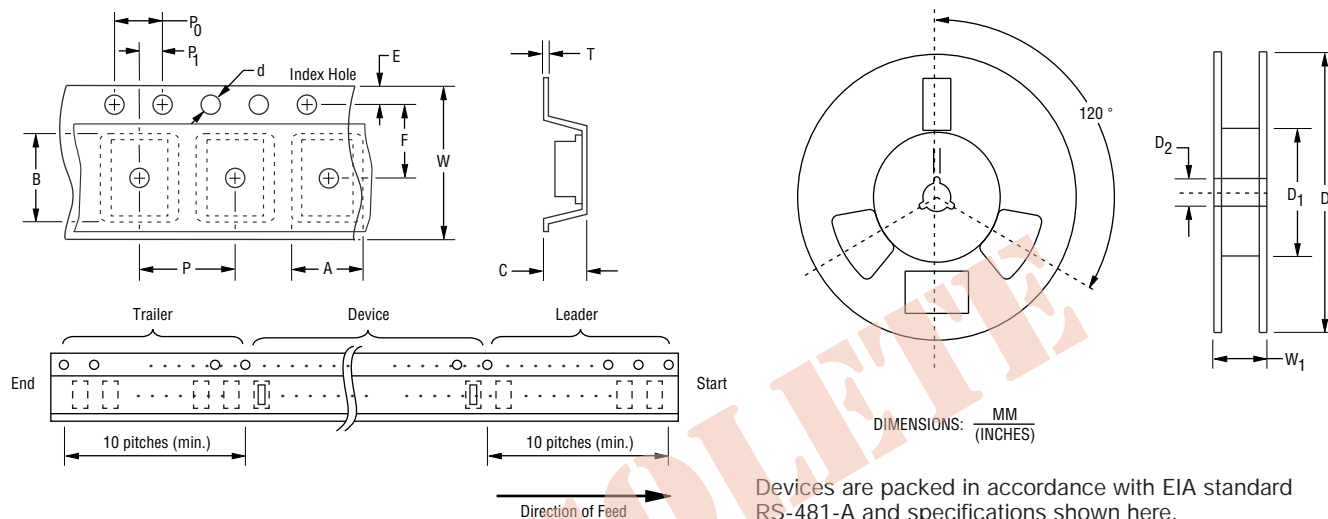
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Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).



Item	Symbol	0603	1005
Carrier Width	A	1.00 ± 0.10 (0.039 - 0.004)	1.55 ± 0.10 (0.061 - 0.004)
Carrier Length	B	1.85 ± 0.10 (0.073 - 0.004)	2.65 ± 0.10 (0.104 - 0.004)
Carrier Depth	C	1.00 ± 0.10 (0.039 - 0.004)	1.05 ± 0.10 (0.041 - 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 - 0.002)	1.55 ± 0.10 (0.061 - 0.004)
Reel Outside Diameter	D	178 (7.008)	178 (7.008)
Reel Inner Diameter	D ₁	60.0 (2.362) MIN.	60.0 (2.362) MIN.
Feed Hole Diameter	D ₂	13.0 ± 0.20 (0.512 - 0.008)	13.0 ± 0.20 (0.512 - 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 - 0.004)	1.75 ± 0.10 (0.069 - 0.004)
Punch Hole Position	F	3.50 ± 0.05 (0.138 - 0.002)	3.50 ± 0.05 (0.138 - 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 - 0.004)	4.00 ± 0.10 (0.157 - 0.004)
Sprocket Hole Pitch	P ₀	4.00 ± 0.10 (0.157 - 0.004)	4.00 ± 0.10 (0.157 - 0.004)
Embossment Center	P ₁	2.00 ± 0.05 (0.079 - 0.002)	2.00 ± 0.05 (0.079 - 0.002)
Overall Tape Thickness	T	0.20 ± 0.05 (0.008 - 0.002)	0.25 ± 0.05 (0.010 - 0.002)
Tape Width	W	8.00 ± 0.20 (0.315 - 0.008)	8.00 ± 0.20 (0.315 - 0.008)
Reel Width	W ₁	13.5 (0.531) MAX.	13.5 (0.531) MAX.
Quantity per Reel	--	4,000	4,000

REV. 08/19

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