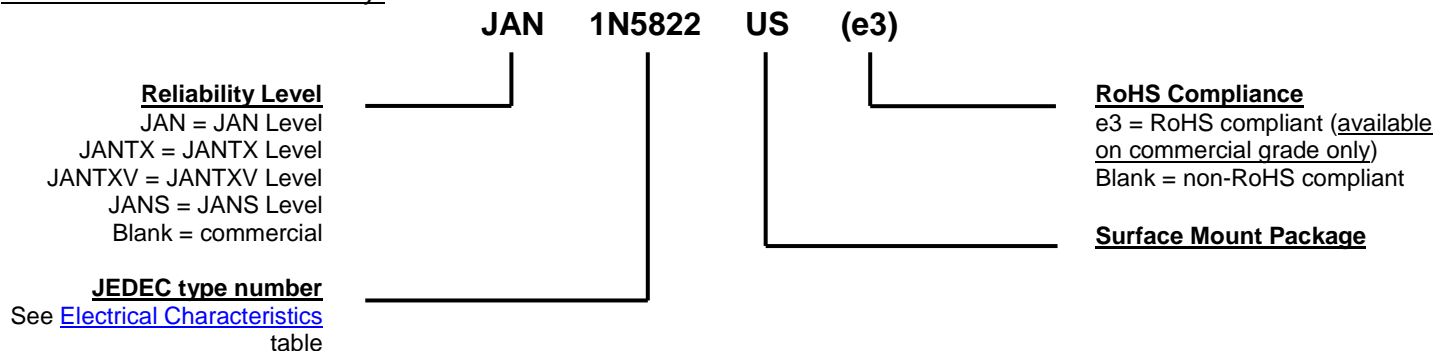


MECHANICAL and PACKAGING

- CASE: Voidless hermetically sealed hard glass.
- TERMINALS: Tin-lead plate with >3% lead. Solder dip is available upon request. RoHS compliant matte-tin is available on commercial levels (no JAN levels).
- MARKING: Body painted and alpha numeric.
- POLARITY: Cathode indicated by band.
- Tape & Reel option: Standard per EIA-481-1-A with 12 mm tape. Consult factory for quantities.
- See [Package Dimensions](#) on last page.

PART NOMENCLATURE
1N5820US – 1N5821US

1N5822US and 1N6864US only:

SYMBOLS & DEFINITIONS

Symbol	Definition
C_T	Capacitance: The capacitance in pF at a frequency of 1 MHz and specified voltage.
f	frequency
I_R	Maximum Reverse Current: The maximum reverse (leakage) current that will flow at the specified voltage and temperature.
I_O	Average Rectified Output Current: The output current averaged over a full cycle with a 50 Hz or 60 Hz sine-wave input and a 180 degree conduction angle.
V_F	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
V_R	Reverse Voltage: The dc voltage applied in the reverse direction below the breakdown region.
V_{RWM}	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.

ELECTRICAL CHARACTERISTICS @ 25 °C unless otherwise noted.

TYPE NUMBER	WORKING PEAK REVERSE VOLTAGE	MAXIMUM FORWARD VOLTAGE V_{FM1}	MAXIMUM FORWARD VOLTAGE V_{FM2}	MAXIMUM FORWARD VOLTAGE V_{FM3}	MAXIMUM REVERSE LEAKAGE CURRENT I_{RM} @ V_{RM}	
	V_{RWM}	$I_{FM} = 1.0$ A	$I_{FM} = 3.0$ A	$I_{FM} = 9.4$ A	$T_J = +25$ °C	$T_J = +100$ °C
	V (pk)	Volts	Volts	Volts	mA	mA
1N5820US	20	0.40	0.50	0.70	0.10 @ 20 V	12.5 @ 20 V
1N5821US	30	0.40	0.50	0.70	0.10 @ 30 V	12.5 @ 30 V
1N5822US	40	0.40	0.50	0.70	0.10 @ 40 V	12.5 @ 40 V
1N6864US	80	0.50	0.70	N/A	0.15 @ 80 V	18.0 @ 80 V

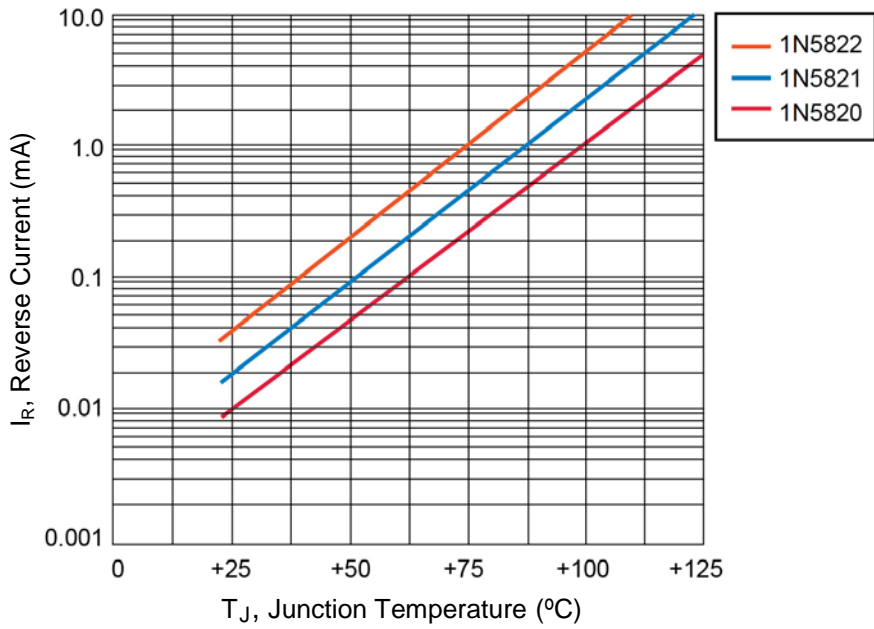
GRAPHS


FIGURE 1
Typical Reverse Leakage Current at Rated PIV (PULSED)

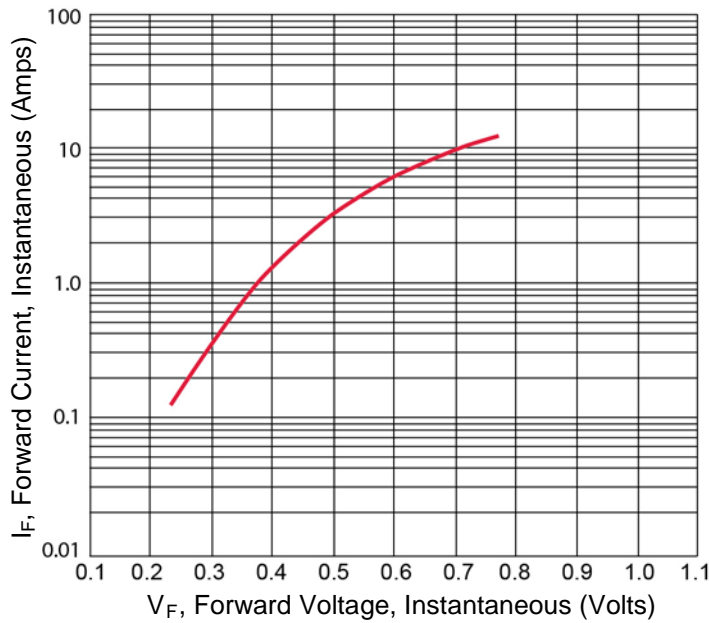


FIGURE 2
Typical Forward Voltage

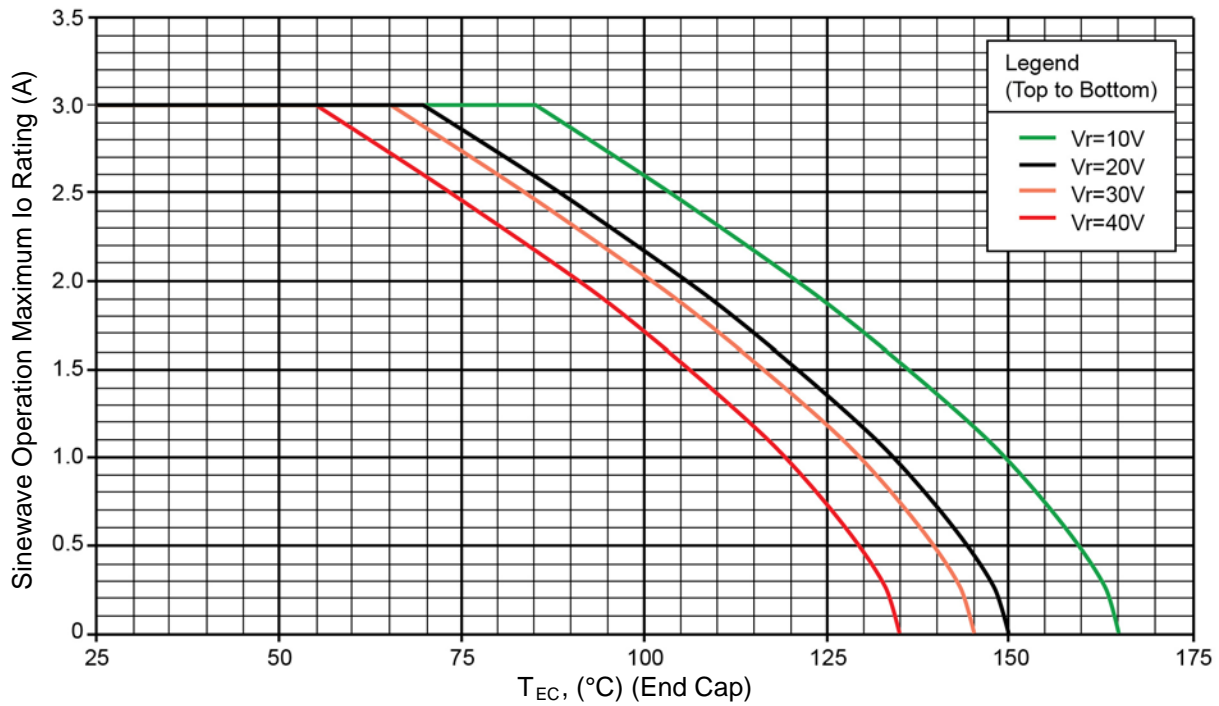
GRAPHS (continued)


FIGURE 3
Temperature Current Derating For 1N5822US

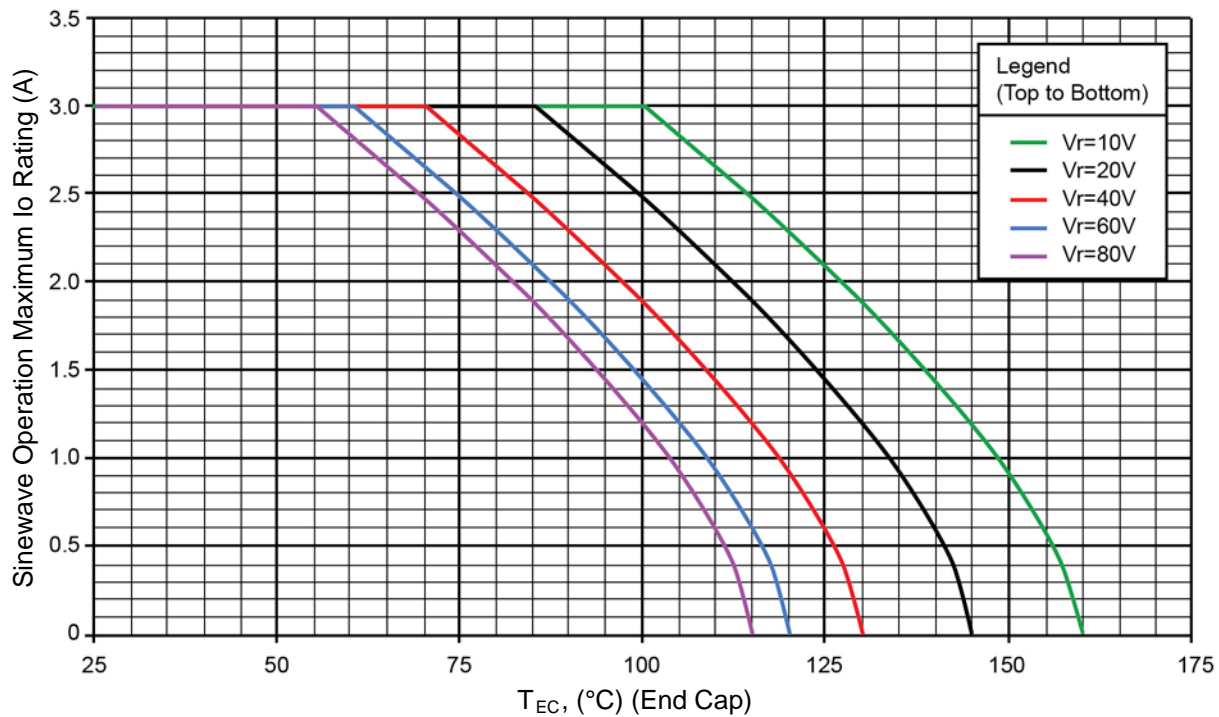


FIGURE 4
Temperature Current Derating For 1N6864US

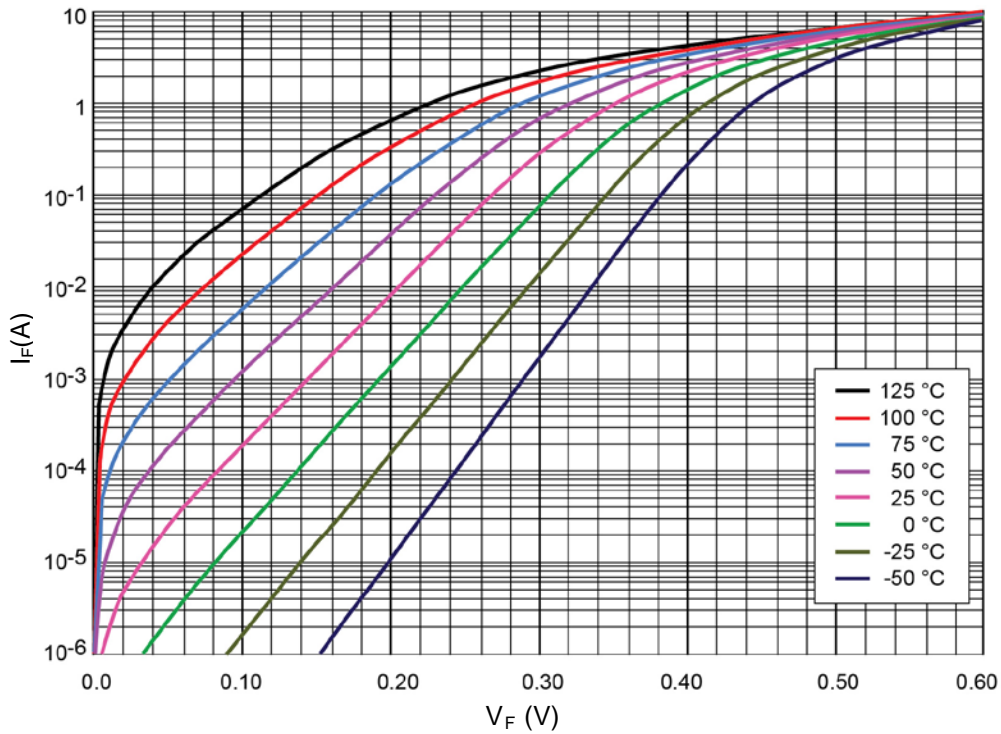
GRAPHS (continued)


FIGURE 5
Schottky $V_F - I_F$ Characteristics (Typical 1N5822US)

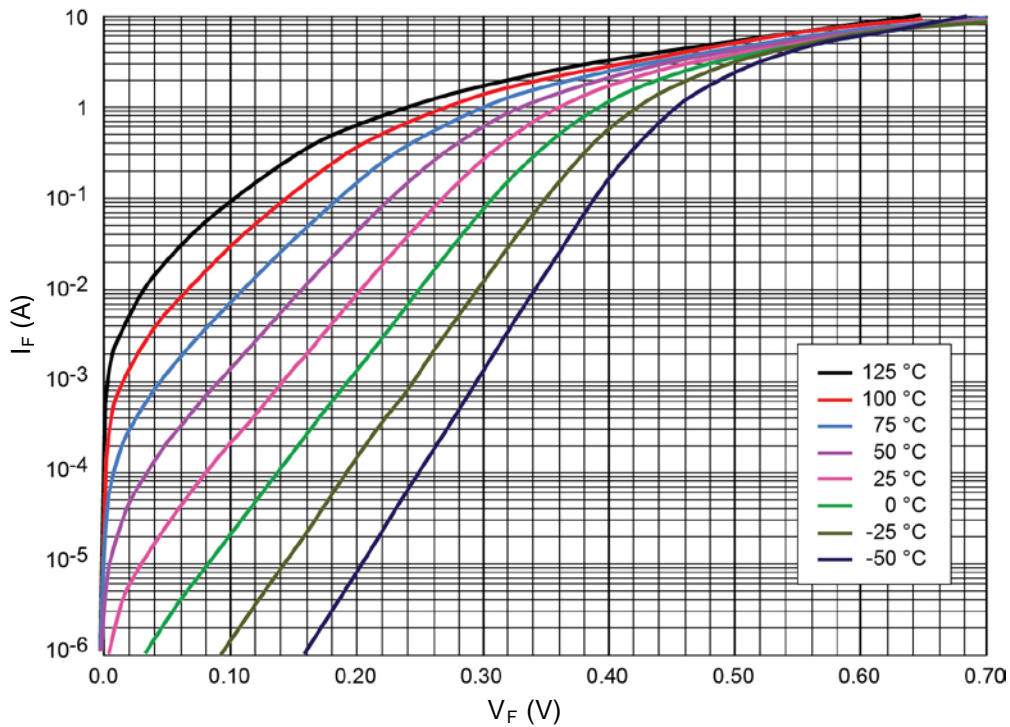


FIGURE 6
Schottky $V_F - I_F$ Characteristics (Typical 1N6864US)

GRAPHS (continued)

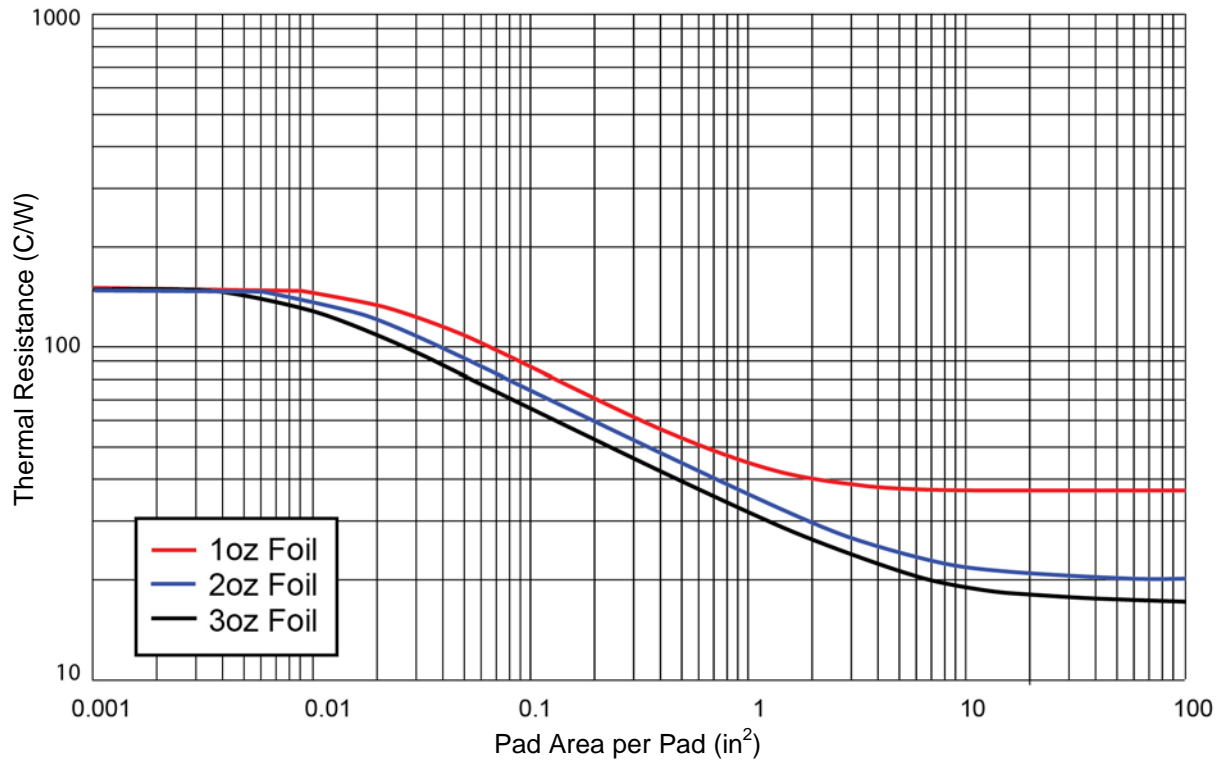
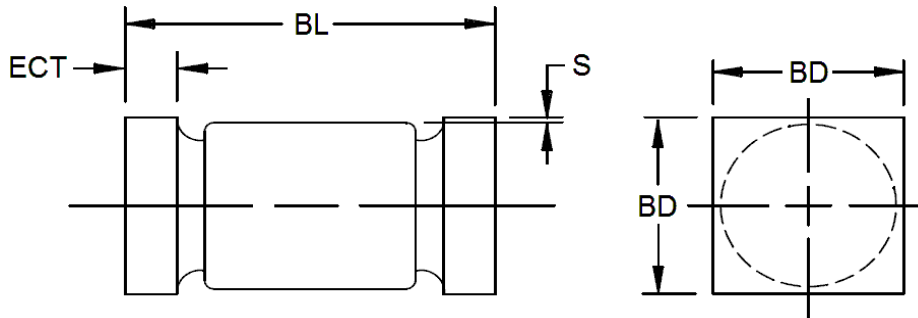


FIGURE 7
Thermal Resistance vs FR4 Pad Area Still Air with the PCB horizontal

PACKAGE DIMENSIONS


DIM	INCH		MILLIMETERS	
	MIN	MAX	MIN	MAX
BD	0.137	0.148	3.48	3.76
ECT	0.019	0.028	0.48	0.71
BL	0.200	0.225	5.08	5.72
S	0.003 MIN.		0.08 MIN.	

NOTES:

1. Dimensions are in inches. Millimeters are given for information only.
2. Dimensions are pre-solder dip.
3. U-suffix parts are structurally identical to the US-suffix parts.
4. In accordance with ASME Y14.5M, diameters are equivalent to Φ x symbology.