

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	7	V
Collector Current—Continuous (Note 5)	I _C	150	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5) $T_A = 25^{\circ}C$	PD	150	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{ØJA}	833	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

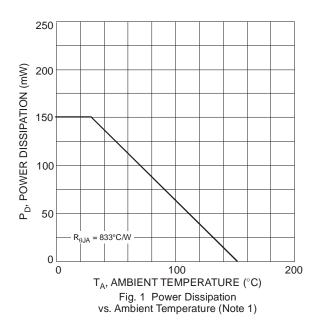
ESD Ratings (Note 6)

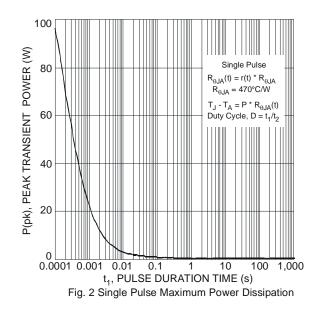
Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge—Human Body Model	ESD HBM	4000	V	3A
Electrostatic Discharge—Machine Model	ESD MM	400	V	С

Notes: 5. For a device mounted with the collector lead, on a minimum recommended pad layout of 1oz copper on a single-sided 1.6mm FR4 PCB. Device is measured under still air conditions whilst operating in a steady-state.

6. Refer to JEDEC specification JESD22-A114 and JESD22-A115.

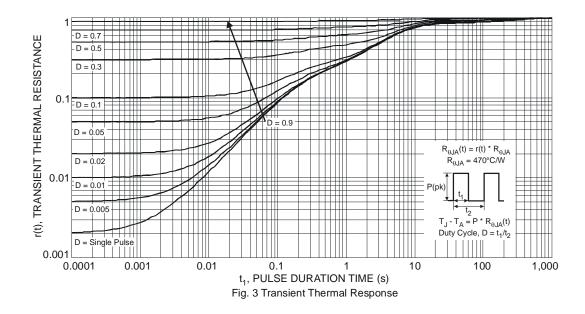
Thermal Characteristics and Derating Information







Thermal Characteristics and Derating Information (continued)



Electrical Characteristics @T_A = 25°C unless otherwise specified

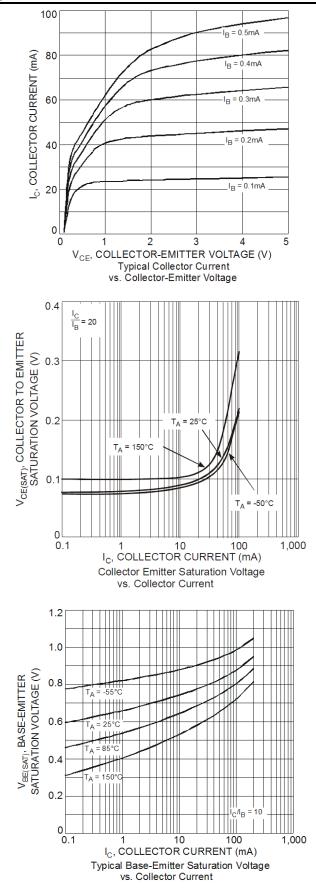
Characteristic		Symbol	Min	T.m	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)		Symbol	IVIIN	Тур.	wax	Unit	Test Condition
Collector-Base Breakdown Voltage		V _{(BR)CBO}	60			V	$I_{\rm C} = 50 \mu {\rm A}, I_{\rm E} = 0$
Collector-Emitter Breakdown Voltage		V _{(BR)CEO}	50			V	$I_{\rm C} = 1$ mA, $I_{\rm B} = 0$
Emitter-Base Breakdown Voltage		V _{(BR)EBO}	7			V	$I_E = 50\mu A$, $I_C = 0$
Collector Cutoff Current		ICBO			100	nA	$V_{CB} = 60V$
Emitter Cutoff Current		I _{EBO}	_	_	100	nA	$V_{EB} = 6V$
ON CHARACTERISTICS (Note 7)							•
DC Current Gain	2DC4617Q 2DC4617R 2DC4617S	hFE	120 180 270		270 390 560		$V_{CE} = 6V, I_C = 1mA$
Collector-Emitter Saturation Voltage		V _{CE(SAT)}			0.4	V	$I_{\rm C} = 50 {\rm mA}, I_{\rm B} = 5 {\rm mA}$
SMALL SIGNAL CHARACTERISTICS							
Output Capacitance		C _{obo}		2	3.5	pF	$V_{CB} = 12V, f = 1MHz, I_E = 0$
Current Gain-Bandwidth Product		f⊤	_	140	_	MHz	$V_{CE} = 12V, I_C = 2mA,$ f = 1MHz
Current Gain-Bandwidth Product		f⊤	_	180	_	MHz	$V_{CE} = 12V$, $I_C = 0mA$, f = 1MHz
Current Gain-Bandwidth Product		f⊤	_	180		MHz	$V_{CE} = 12V$, $I_C = 2mA$, f = 100MHz

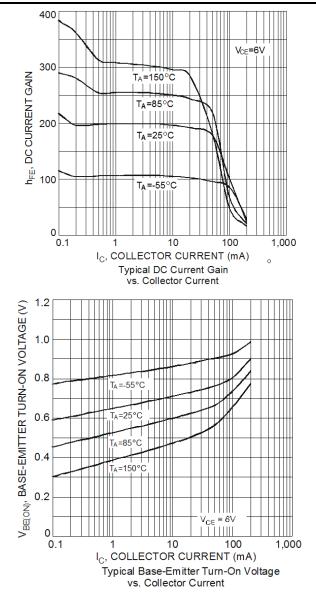
Notes: 7. Measured under pulsed conditions. Pulse width \leq 300µs. Duty cycle \leq 2%.



2DC4617Q/R/S

Typical Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

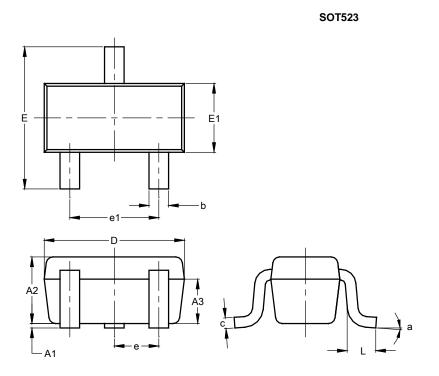






Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

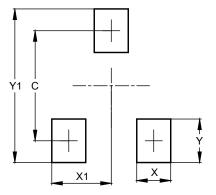


SOT523					
Dim	Min	Max	Тур		
A1	0.00	0.10	0.05		
A2	0.60	0.80	0.75		
A3	0.45	0.65	0.50		
b	0.15	0.30	0.22		
С	0.10	0.20	0.12		
D	1.50	1.70	1.60		
Е	1.45	1.75	1.60		
E1	0.75	0.85	0.80		
е	0.50 BSC				
e1	0.90	1.10	1.00		
L	0.20	0.40	0.33		
а	0°		8°		
All Dimensions in mm					

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT523



Dimensions	Value (in mm)
С	1.29
Х	0.40
X1	0.70
Y	0.51
Y1	1.80



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