NPN Power Silicon Transistor

NEW

2N5339

AEROFLEX
A passion for performance.

Features

- Available in JAN, JANTX, JANTXV and JANS per MIL-PRF-19500/560
- TO-39 (TO-205AD) Package

Maximum Ratings

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	100	Vdc
Collector - Base Voltage	V_{CBO}	100	Vdc
Emitter - Base Voltage	V_{EBO}	6.0	Vdc
Base Current	I_B	1.0	Adc
Collector Current	I_C	5.0	Adc
Total Power Dissipation @ T_A = 25 °C @ T_C = 25 °C	P_T	1.0 17.5	W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200	°C
Thermal Resistance, Junction-to-Air	$R_{\theta JC}$	175	°C/W

Electrical Characteristics

OFF Characteristics	Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage I_C = 50 mAdc	$V_{(BR)CEO}$	100	- - -	Vdc
Collector - Emitter Cutoff Current V_{CE} = 100 Vdc	I_{CEO}	- - -	100	µAdc
Collector - Emitter Cutoff Current V_{CE} = 100 Vdc, V_{BE} = 1.5 Vdc	I_{CEX}	- - -	1.0	µAdc
Collector-8ase Cutoff Current VCB = 90 Vdc	I_{CBO}	- - -	1.0	µAdc
Emitter - Base Cutoff Current V_{EB} = 6.0 Vdc	I_{EBO}	- - -	100	µAdc
ON Characteristics				
Forward Current Transfer Ratio I_C = 0.5 Adc, V_{CE} = 2.0 Vdc I_C = 2.0 Adc, V_{CE} = 2.0 Vdc I_C = 5.0 Adc, V_{CE} = 2.0 Vdc	H_{FE}	 60 60 40	 - - - 240 - - -	
Collector - Emitter Saturation Voltage I_C = 2.0 Adc, I_B = 0.2 Adc I_C = 5.0 Adc, I_B = 0.5 Adc	$V_{CE(sat)}$	 - - - - - -	 0.7 1.2	Vdc
Base - Emitter Saturation Voltage I_C = 2.0 Adc, I_B = 0.2 Adc I_C = 5.0 Adc, I_B = 0.5 Adc	$V_{BE(sat)}$	- - -	 1.2 1.8	Vdc

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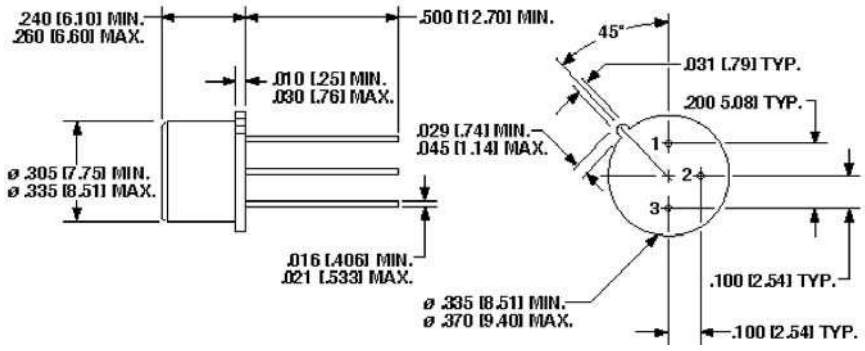
METELICS

Revision Date: 10/12/2011
New Product

Electrical Characteristics -con't

DYNAMIC Characteristics	Symbol	Mimimum	Maximum	Units
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 0.5 Adc, V_{CE}= 10.0 Vdc, f = 10 MHz	$\lvert h_{fe} \rvert$	3	15	
Output Capacitance V_{CB} = 10.0 Vdc, I_E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C_{obo}	- - -	250	pF
Input Capacitance V_{CB} = 2.0Vdc, I_E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C_{ibo}	- - -	1,000	pF
SAFE OPERATING AREA				
DC Tests:	T_C = +25 °C, 1 Cycle, t = 0.5 s			
Test 1:	V_{CE} = 2.0 Vdc, I_C = 5.0 Adc			
Test 2:	V_{CE} = 5.0 Vdc, I_C = 2.0 Adc			
Test 3:	V_{CE} = 90.0 Vdc, I_C = 55 mAdc			

Outline Drawing



NOTE: Dimensions in Inches [mm]

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AEROFLEX
A passion for performance.

Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.