

SOT-323 BIPOLAR TRANSISTORS
TRANSISTOR (PNP)

FEATURES

- * Power dissipation
Pcm: 0.2 W (Tamb=25°C)
- * Collector current
Icm: -0.2 A
- * Collector-base voltage
V(BR)CBO: -160 V
- * Operating and storage junction temperature range
Tj,Tstg: -55°C to +150°C

MECHANICAL DATA

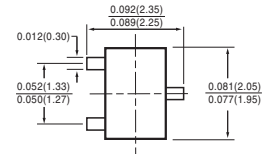
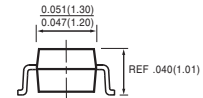
- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.006 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



SOT-323



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Zener Current (see Table "Characteristics")	-	-	-
Max. Steady State Power Dissipation (1)	P _D	200	mW
Max. Operating Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Thermal Resistance Junction to Ambient (1)	R θ _{JA}	-	-	625	°C/W
Max. Instantaneous Forward Voltage at I _F = 10mA	V _F	-	-	-	Volts

NOTES : 1. Valid provided that terminals are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS (@TA=25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS (2)

Collector-Emitter Breakdown Voltage ($I_C = -1.0\text{mA}$, $I_B = 0$)	$V_{(BR)CEO}$	-150	-	Vdc
Collector-Base Breakdown Voltage ($I_C = -100\mu\text{A}$, $I_E = 0$)	$V_{(BR)CBO}$	-160	-	Vdc
Emitter-Base Breakdown Voltage ($I_E = -10\mu\text{A}$, $I_C = 0$)	$V_{(BR)EBO}$	-5	-	Vdc
Collector Cutoff Current ($V_{CB} = -120\text{Vdc}$, $I_E = 0$)	I_{CBO}	-	-50	nAdc
Emitter Cutoff Current ($V_{EB} = -3.0\text{Vdc}$, $I_C = 0$)	I_{EBO}	-	-50	nAdc

ON CHARACTERISTICS (2)

DC Current Gain ($I_C = -1\text{mA}$, $V_{CE} = -5\text{Vdc}$) ($I_C = -10\text{mA}$, $V_{CE} = -5\text{Vdc}$) ($I_C = -50\text{mA}$, $V_{CE} = -5\text{Vdc}$)	h_{FE}	50 60 50	- 240 -	-
Collector-Emitter Saturation Voltage ($I_C = -10\text{mA}$, $I_B = -1\text{mA}$) ($I_C = -50\text{mA}$, $I_B = -5\text{mA}$)	$V_{CE(sat)}$	- -	-0.2 -0.5	Vdc
Base-Emitter Saturation Voltage ($I_C = -10\text{mA}$, $I_B = -1\text{mA}$) ($I_C = -50\text{mA}$, $I_B = -5\text{mA}$)	$V_{BE(sat)}$	- -	-1 -1	Vdc

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = -10\text{mA}$, $V_{CE} = -10\text{Vdc}$, $f = 100\text{MHz}$)	f_T	100	300	MHz
Output Capacitance ($V_{CB} = -10\text{Vdc}$, $I_E = 0$, $f = 1.0\text{MHz}$)	C_{ob}	-	6	pF
Small-Signal Current Gain ($I_C = -1.0\text{mA}$, $V_{CE} = -10\text{Vdc}$, $f = 1.0\text{kHz}$)	h_{fe}	40	200	-
Noise figure ($I_C = -0.2\text{mA}$, $V_{CE} = -5\text{Vdc}$, $f = 1.0\text{kHz}$, $R_g = 10\Omega$)	NF	-	8	dB

NOTES : 2. Pulse Test: Pulse Width \leq 300 μ s,Duty Cycle \leq 2.0%