

SOT-23 BIPOLAR TRANSISTORS
TRANSISTOR(NPN)

FEATURES

- * Power dissipation
P_{CM} : 0.2 W (T_{amb}=25°C)
- * Collector current
I_{CM} : 0.8 A
- * Collector-base voltage
V_{(BR)CBO} : 75 V
- * Operating and storage junction temperature range
T_J, T_{stg}: -55°C to +150°C

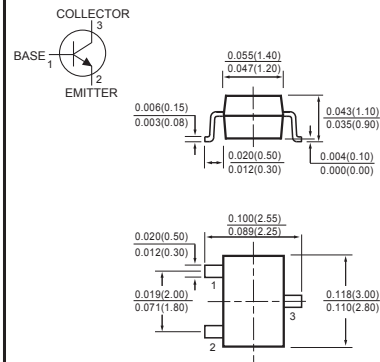
MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.008 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

SOT-23



Dimensions in inches and (millimeters)

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

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS
Collector-base breakdown voltage (I _C = 10μA, I _E =0)	V _{(BR)CBO}	75	-	-	V
Collector-emitter breakdown voltage (I _C = 10mA, I _B =0)	V _{(BR)CEO}	45	-	-	V
Emitter-base breakdown voltage (I _E = 10μA, I _C =0)	V _{(BR)EBO}	5	-	-	V
Collector cut-off current (V _{CE} = 45V, I _E =0)	I _{CBO}	-	-	0.02	μA
Collector cut-off current (V _{EB} = 4V, I _C =0)	I _{EBO}	-	-	0.02	μA
DC current gain (V _{CE} = 10V, I _C = 0.1mA)	h _{FE}	35	-	-	-
DC current gain (V _{CE} = 1V, I _C = 10mA)		75	-	-	-
DC current gain (V _{CE} = 1V, I _C = 100mA)		100	-	250	-
DC current gain (V _{CE} = 2V, I _C = 500mA)		35	-	-	-
Collector-emitter saturation voltage (I _C = 100mA, I _B = 10mA)	V _{CE(sat)}	-	-	0.3	V
Collector-emitter saturation voltage (I _C = 500mA, I _B = 50mA)		-	-	0.7	V
Base-emitter saturation voltage (I _C = 100mA, I _B = 10mA)	V _{BE(sat)}	-	-	1.25	V
Base-emitter saturation voltage (I _C = 500mA, I _B = 50mA)		-	-	2	V
Transition frequency (V _{CE} = 10V, I _C = 20mA, f=100MHz)	f _T	100	-	-	MHz
Collector base capacitance (V _{CB} = 10V, I _E = 0, f=1MHz)	C _{CB}	-	-	12	pF
Emitter base capacitance (V _{EB} = 0.5V, I _E = 0, f=1MHz)	C _{EB}	-	-	80	pF
Noise figure (V _{CE} = 5V, I _E = 0.2mA, f=1kHz, Δf=200Hz, R _G =2KΩ)	NF	-	-	10	dB

Marking

EF

Note 1: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2006-3

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