

**SOT-23 BIPOLAR TRANSISTORS  
TRANSISTOR(NPN)**

**FEATURES**

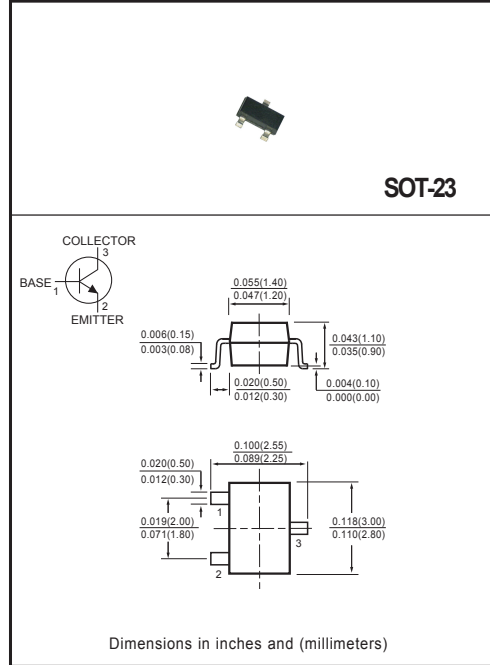
- \* Power dissipation  
P<sub>CM</sub> : □ 0.25 □ W (T<sub>amb</sub>=25°C)
- \* Collector current  
I<sub>CM</sub> : □ 0.025 □ A
- \* Collector-base voltage  
V<sub>(BR)CBO</sub> : □ 30 □ V
- \* Operating and storage junction temperature range  
T<sub>J</sub>, T<sub>stg</sub>: -55°C to +150°C

**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%.



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

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS
Collector-base breakdown voltage (I <sub>C</sub> = 100μA, I <sub>E</sub> =0)	V <sub>(BR)CBO</sub>	30	-	-	V
Collector-emitter breakdown voltage (I <sub>C</sub> = 100μA, I <sub>B</sub> =0)	V <sub>(BR)CEO</sub>	20	-	-	V
Emitter-base breakdown voltage (I <sub>E</sub> = 100μA, I <sub>C</sub> =0)	V <sub>(BR)EBO</sub>	4	-	-	V
Collector cut-off current (V <sub>CB</sub> = 20V, I <sub>E</sub> =0)	I <sub>CBO</sub>	-	-	0.1	μA
Collector cut-off current (V <sub>CE</sub> = 15V, I <sub>C</sub> =0)	I <sub>CEO</sub>	-	-	0.1	μA
Collector cut-off current (V <sub>EB</sub> = 4V, I <sub>C</sub> =0)	I <sub>EBO</sub>	-	-	0.1	μA
DC current gain (V <sub>CE</sub> = 10V, I <sub>C</sub> = 7mA)	h <sub>FE</sub>	40	-	120	-
Collector-emitter saturation voltage (I <sub>C</sub> = 10mA, I <sub>B</sub> = 1mA)	V <sub>CE(sat)</sub>	-	-	0.3	V
Base - emitter voltage (I <sub>C</sub> = 7mA, V <sub>CE</sub> = 10V)	V <sub>BE(on)</sub>	-	-	0.9	V
Transition frequency (V <sub>CE</sub> = 10V, I <sub>C</sub> = 5mA, f=100MHz)	f <sub>T</sub>	275	-	-	MHz

Marking	G11
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Note 1: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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