

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

**FEATURES**

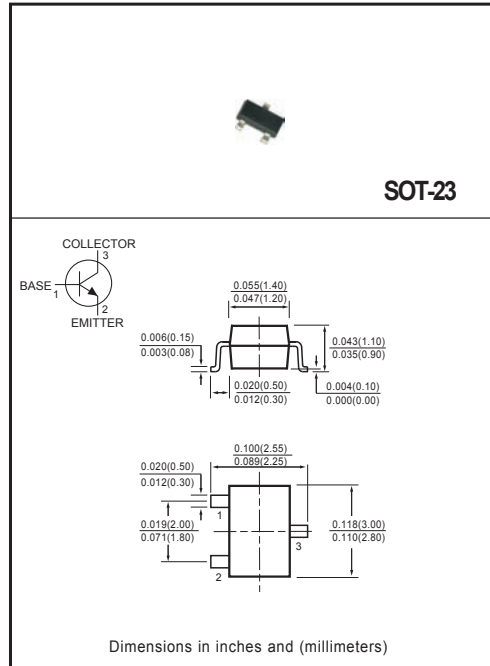
- \* Power dissipation  
 $P_{CM} : \square \quad 0.225 \square \quad W \quad (T_{amb}=25^{\circ}C)$
- \* Collector current  
 $I_{CM} : \square \quad 0.5 \square \quad A$
- \* Collector-base voltage  
 $V_{(BR)CBO} : \square \quad 50 \square \quad V$
- \* Operating and storage junction temperature range  
 $T_{J, Tstg} : -55^{\circ}C \text{ to } +150^{\circ}C$

**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, 60 Hz, 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 ( $I_C = 10\mu A, I_E = 0$ )	$V_{(BR)CBO}$	50	-	-	V
Collector-emitter breakdown voltage ( $I_C = 10mA, I_B = 0$ )	$V_{(BR)CEO}$	45	-	-	V
Emitter-base breakdown voltage ( $I_E = 10\mu A, I_C = 0$ )	$V_{(BR)EBO}$	5	-	-	V
Collector cut-off current ( $V_{CB} = 20V, I_E = 0$ )	$I_{CBO}$	-	-	0.1	$\mu A$
Collector cut-off current ( $V_{CE} = 20V, I_E = 0$ )	$I_{CEO}$	-	-	0.1	$\mu A$
Collector cut-off current ( $V_{EB} = 5V, I_C = 0$ )	$I_{EBO}$	-	-	10	$\mu A$
DC current gain ( $V_{CE} = 1V, I_C = 100mA$ )	$h_{FE}$	100	-	600	-
Collector-emitter saturation voltage ( $I_C = 500mA, I_B = 50mA$ )	$V_{CE(sat)}$	-	-	0.62	V
Base-emitter voltage ( $I_C = 500mA, V_{CE} = 1V$ )	$V_{BE(on)}$	-	-	1.2	V

MARKING	U1
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Note : "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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