

## isc Silicon PNP Transistor

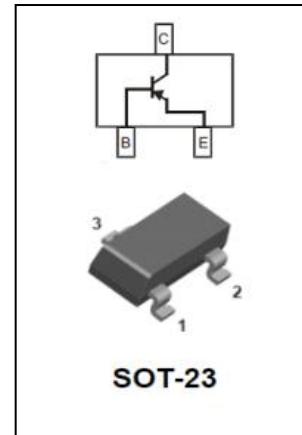
## MMBT2907A

### DESCRIPTION

- Low Voltage Use
- Ultra Super Mini Mold Package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for use in low noise and small signal amplifiers from VHF band to UHF band



### ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_c$	Collector Current-Continuous	-0.6	A
$P_c$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.3	W
$T_j$	Junction Temperature	-55~150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C

### ELECTRICAL CHARACTERISTICS

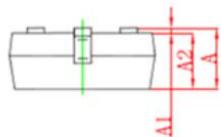
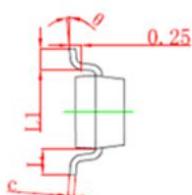
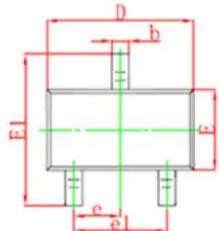
$T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_c = -10\text{mA} ; I_B = 0$	-60			V
$I_{CBO}$	Collector Cutoff Current	$V_{CE} = -50\text{V} ; I_E = 0$			-0.1	$\mu\text{A}$
$I_{CEX}$	Collector Cutoff Current	$V_{CE} = -30\text{V} ; V_{BE} = -0.5\text{V}$			-0.05	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_c = -0.1\text{mA} ; V_{CE} = -10\text{V}$	75			
		$I_c = 1\text{mA} ; V_{CE} = -10\text{V}$	100			
		$I_c = -10\text{mA} ; V_{CE} = -10\text{V}$	100			
		$I_c = -150\text{mA} ; V_{CE} = -10\text{V}$	100		300	
		$I_c = -500\text{mA} ; V_{CE} = -10\text{V}$	50			
$V_{CE(\text{sat})-1}$	Collector-Emitter Saturation Voltage	$I_c = -150\text{mA}, I_B = -15\text{mA}$			-0.4	V
$V_{CE(\text{sat})-2}$	Collector-Emitter Saturation Voltage	$I_c = -500\text{mA}, I_B = -50\text{mA}$			-1.6	V
$V_{BE(\text{sat})-1}$	Base-Emitter Saturation Voltage	$I_c = -150\text{mA}, I_B = -15\text{mA}$			-1.3	V
$V_{BE(\text{sat})-2}$	Base-Emitter Saturation Voltage	$I_c = -500\text{mA}, I_B = -50\text{mA}$			-2.6	V

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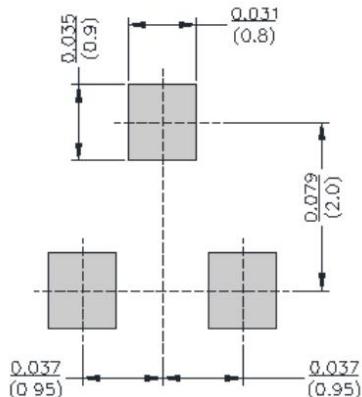
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### SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

### SOT-23 Suggested Pad Layout



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