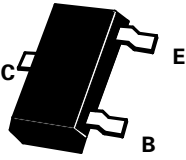


SOT23 NPN SILICON PLANAR MEDIUM POWER SWITCHING TRANSISTORS

ISSUE 2 – SEPTEMBER 1995

BSS66
BSS67

PARTMARKING DETAILS — BSS66 - M6
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ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Peak Pulse Current	I_{CM}	200	mA
Continuous Collector Current	I_C	100	mA
Base Current	I_B	50	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{TOT}	330	mW
Operating and Storage Temperature Range	$t_j:t_{stg}$	-55 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40		V	$I_C=1mA$
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60		V	$I_C=10\mu A$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6		V	$I_E=10\mu A$
Collector- Emitter Cut-off Current	I_{CES}		50	nA	$V_{CES}=30V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.20 0.30	V V	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	0.65	0.85 0.95	V V	$I_C=10mA, I_B=1mA$ $I_C=50mA, I_B=5mA^*$
Static Forward Current Transfer Ratio	h_{FE}	20 35 50 30 15	150		$I_C=100\mu A,$ $I_C=1mA,$ $I_C=10mA, V_{CE}=1V$ $I_C=50mA^*,$ $I_C=100mA^*,$
Static Forward Current Transfer Ratio	h_{FE}	40 70 100 60 30	300		$I_C=100\mu A,$ $I_C=1mA,$ $I_C=10mA, V_{CE}=1V$ $I_C=50mA^*,$ $I_C=100mA^*,$
Transition Frequency	f_T	250 300		MHz MHz	$I_C=10mA, V_{CE}=20V$ $f=100MHz$
Collector-Base Capacitance	C_{obo}		4	pF	$V_{CB}=5V, f=100kHz$
Emitter-Base Capacitance	C_{ibo}		8	pF	$V_{EB}=0.5V, f=100kHz$
Noise Figure	N	Typ. 6		dB	$I_C=100\mu A, V_{CE}=5V$ $R_S=1k\Omega, f=10Hz$ to 15.7 kHz
Switching times: Delay; Rise	$t_d; t_r$		35	ns	$V_{CC}=3V, I_C=10mA$
Storage Time	t_s		200	ns	$I_{B1}= I_{B2} = 1mA$
Fall Time	t_f		50	ns	

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

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