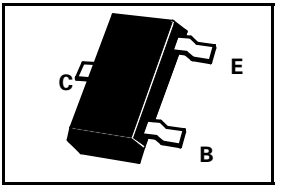
SOT23 NPN SILICON PLANAR MEDIUM POWER SWITCHING TRANSISTORS

ISSUE 2 – SEPTEMBER 1995 ✪

BSS66
BSS67

PARTMARKING DETAILS — BSS66 - M6
BSS67 - M7
BSS66R - M8
BSS67R - M9



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°C	P_{TOT}	330	mW
Operating and Storage Temperature Range	t_j:t_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°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=10μA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6		V	I_E=10μA
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 BSS66	h_{FE}	20 35 50 30 15	 150 		I_C=100μA, I_C=1mA, I_C=10mA, V_{CE}=1V I_C=50mA*, I_C=100mA*,
Static Forward Current Transfer Ratio BSS67	h_{FE}	40 70 100 60 30	 300 		I_C=100μA, I_C=1mA, I_C=10mA, V_{CE}=1V I_C=50mA*, I_C=100mA*,
Transition Frequency BSS66 BSS67	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=100μA, V_{CE}=5V R_S=1kΩ, f=10Hz to15.7 kHz
Switching times: Delay; Rise Storage Time Fall Time	t_d; t_f t_s t_f		35 200 50	ns ns ns	V_{CC}=3V, I_C=10mA I_{B1}= I_{B2} =1mA

* Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%