

2SD999 TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM} : 0.5 W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 1 A

Collector-base voltage

$V_{(BR)CBO}$: 30 V

Operating and storage junction temperature range

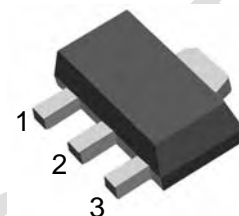
T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

SOT-89

1. BASE

2. COLLECTOR

3. EMITTER



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=100mA$	90		400	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=1A$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1A, I_B=100mA$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$			1.2	V
Base-emitter voltage	V_{BE}	$V_{CE}=6V, I_C=10mA$	0.6		0.7	V
Transition frequency	f_T	$V_{CE}=6V, I_C=10mA$		130		MHz
Collector output capacitance	C_{ob}	$V_{CB}=6V, I_E=0, f=1MHz$		22		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	CM	CL	CK
Range	90-180	135-270	200-400
Marking			

