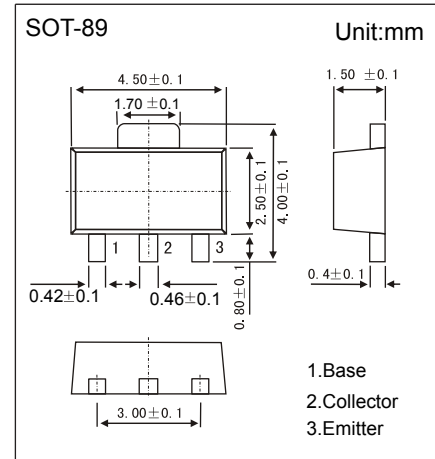


NPN Transistors

2SD999

■ Features

- Collector Current Capability $I_c=1A$
- Collector Emitter Voltage $V_{CEO}=25V$



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	25	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_c	1	A
Collector Current - Pulse	I_{CP}	1.5	
Collector Power Dissipation (Note.1)	P_c	2	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1 : Mounted on ceramic substrate of $16cm^2 \times 0.7mm$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = 100 \mu A, I_E = 0$	30			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c = 1 mA, I_B = 0$	25			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_c = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 30 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 1 A, I_B = 100 mA$			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 1 A, I_B = 100 mA$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 6 V, I_c = 10 mA$	0.6		0.7	
DC current gain	h_{FE}	$V_{CE} = 1 V, I_c = 100 mA$	90		400	
		$V_{CE} = 1 V, I_c = 1 A$	50			
Collector output capacitance	C_{ob}	$V_{CB} = 6 V, I_E = 0, f = 1 MHz$		22		μF
Transition frequency	f_t	$V_{CE} = 6 V, I_E = -10 mA$		130		MHz

■ Classification of $h_{fe}(1)$

Type	2SD999-M	2SD999-L	2SD999-K
Range	90-180	135-270	200-400
Marking	CM	CL	CK



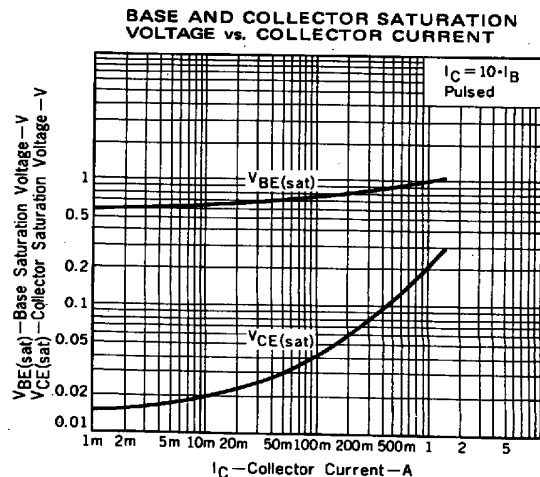
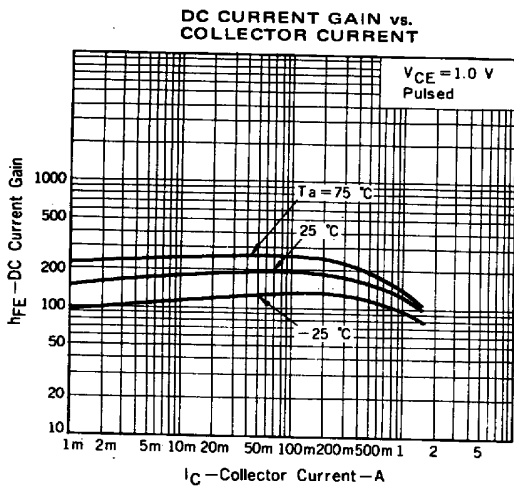
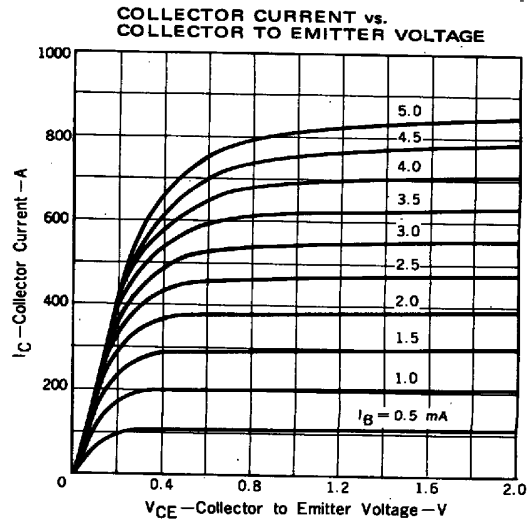
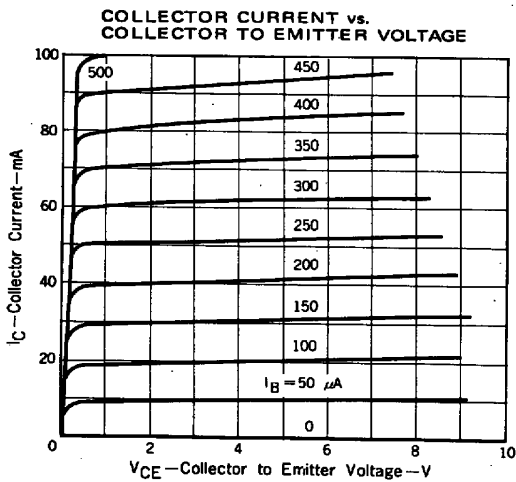
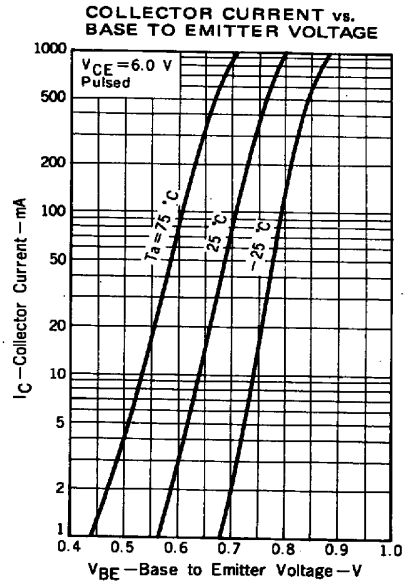
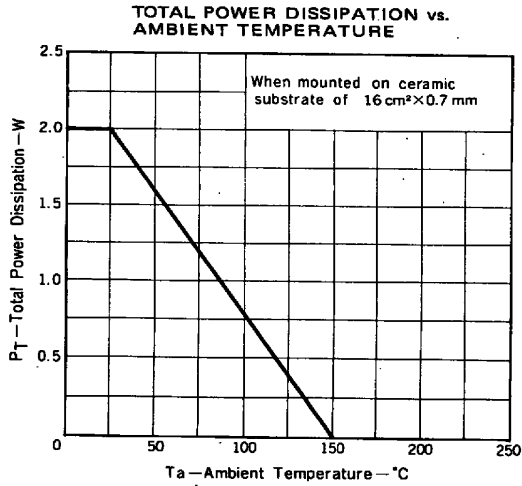
炬芯微
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SMD Type Transistors

NPN Transistors

2SD999

Typical Characteristics



NPN Transistors

2SD999

■ Typical Characteristics

