

# 2SD2549

## Silicon NPN triple diffusion planar type

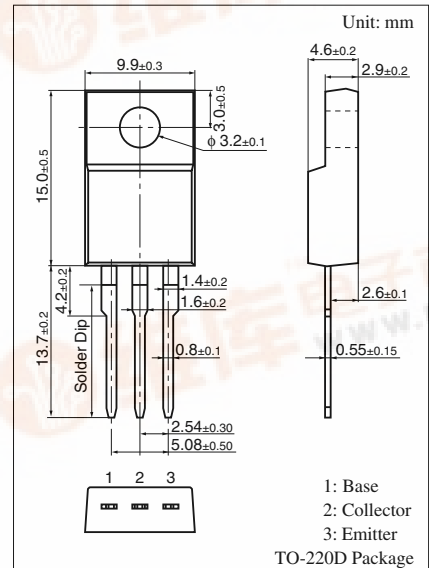
For power amplification

### ■ Features

- High forward current transfer ratio  $h_{FE}$  which has satisfactory linearity
- Low collector to emitter saturation voltage  $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw

### ■ Absolute Maximum Ratings $T_C = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	80	V
Collector to emitter voltage	$V_{CEO}$	80	V
Emitter to base voltage	$V_{EBO}$	6	V
Peak collector current	$I_{CP}$	5	A
Collector current	$I_C$	3	A
Collector power dissipation	$P_C$	$T_C = 25^\circ C$	20
		$T_a = 25^\circ C$	2
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$



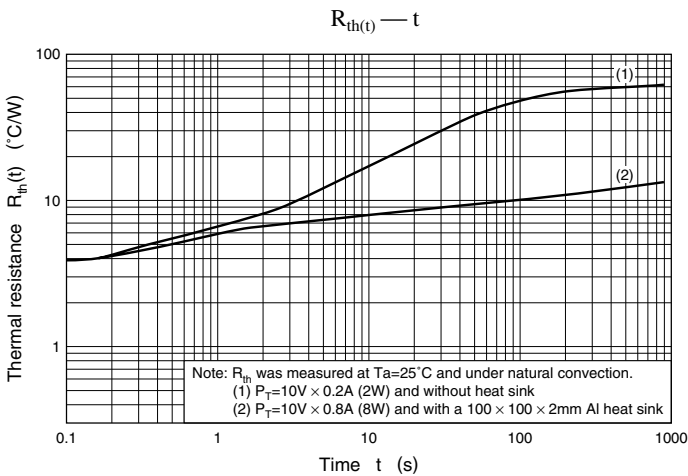
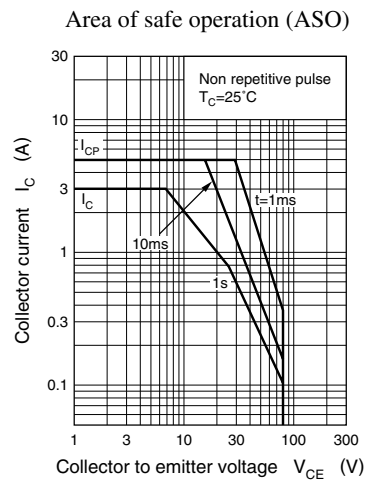
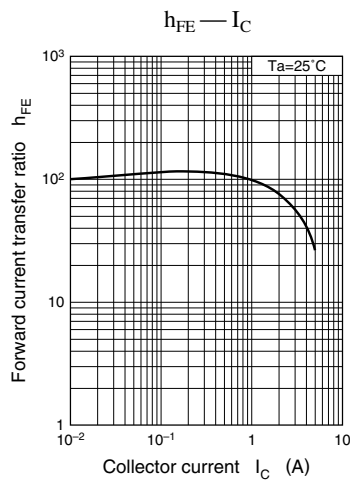
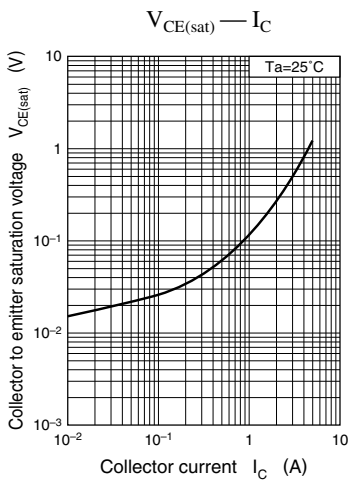
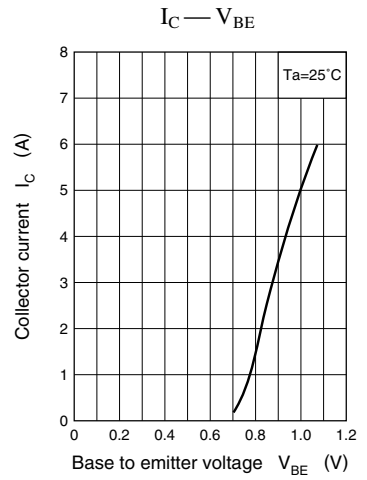
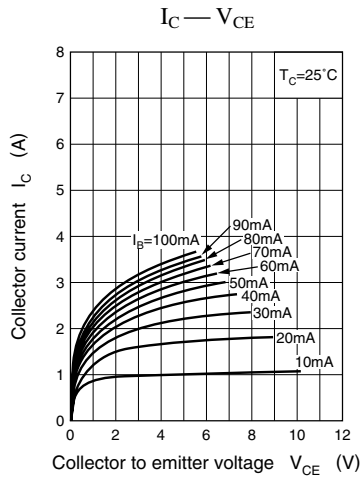
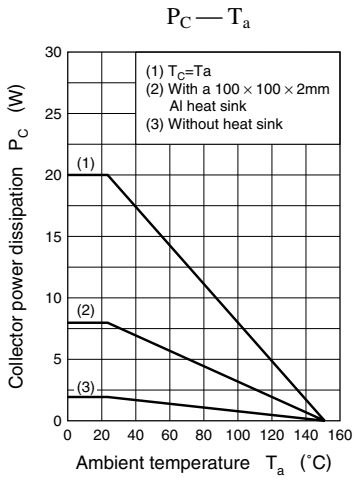
### ■ Electrical Characteristics $T_C = 25^\circ C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CES}$	$V_{CE} = 70 V, V_{BE} = 0$			100	$\mu A$
	$I_{CEO}$	$V_{CE} = 70 V, I_B = 0$			100	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 6 V, I_C = 0$			1	mA
Collector to emitter voltage	$V_{CEO}$	$I_C = 30 mA, I_B = 0$	80			V
Forward current transfer ratio	$h_{FE1}^*$	$V_{CE} = 4 V, I_C = 1 A$	70		250	
	$h_{FE2}$	$V_{CE} = 4 V, I_C = 3 A$	10			
Base to emitter voltage	$V_{BE}$	$V_{CE} = 4 V, I_C = 3 A$			1.8	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3 A, I_B = 0.375 A$			0.7	V
Transition frequency	$f_T$	$V_{CE} = 10 V, I_C = 0.5 A, f = 10 MHz$		30		MHz
Turn-on time	$t_{on}$	$I_C = 1 A, I_{B1} = 0.1 A, I_{B2} = -0.1 A,$			0.5	$\mu s$
Storage time	$t_{stg}$	$V_{CC} = 50 V$			4.5	$\mu s$
Fall time	$t_f$				0.5	$\mu s$

Note) \*: Rank classification

Rank	Q	P
$h_{FE1}$	70 to 150	120 to 250





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