

# 2SD1269

Silicon NPN epitaxial planar type

For power switching  
Complementary to 2SB0944 (2SB944)

## Features

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

## Absolute Maximum Ratings ( $T_C=25^{\circ}C$ )

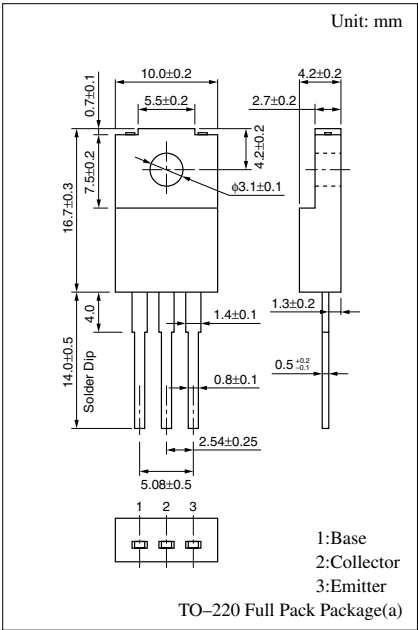
Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	130	V
Collector to emitter voltage	$V_{CEO}$	80	V
Emitter to base voltage	$V_{EBO}$	7	V
Peak collector current	$I_{CP}$	8	A
Collector current	$I_C$	4	A
Collector power dissipation	$P_C$	35	W
		2	
Junction temperature	$T_j$	150	$^{\circ}C$
Storage temperature	$T_{stg}$	-55 to +150	$^{\circ}C$

## Electrical Characteristics ( $T_C=25^{\circ}C$ )

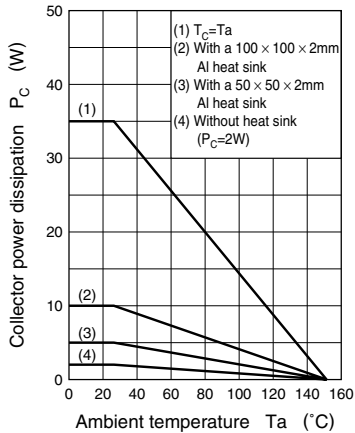
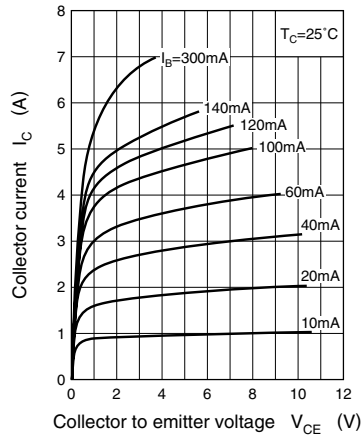
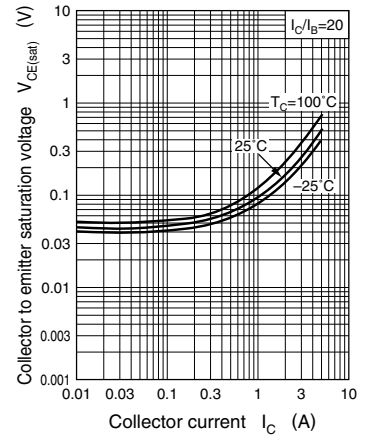
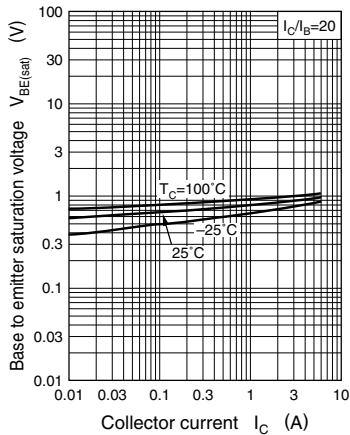
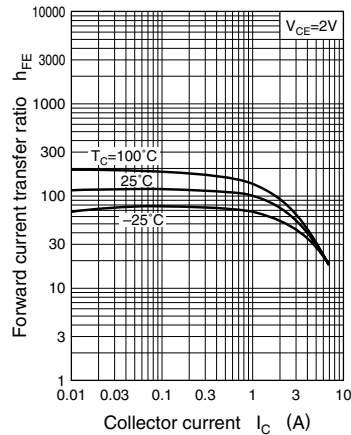
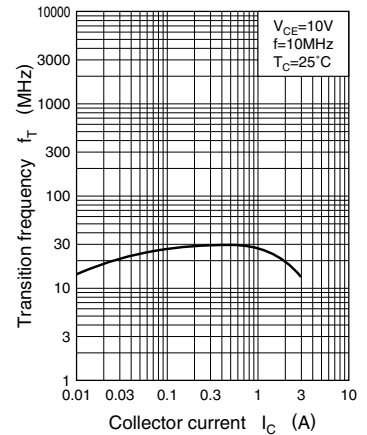
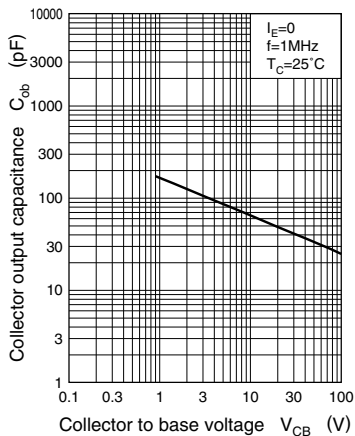
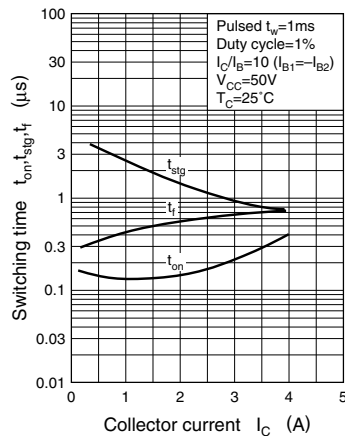
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$			10	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			50	$\mu A$
Collector to emitter voltage	$V_{CEO}$	$I_C = 10mA, I_B = 0$	80			V
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = 2V, I_C = 0.1A$	45			
	$h_{FE2}^*$	$V_{CE} = 2V, I_C = 1A$	60		260	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 0.15A$			0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3A, I_B = 0.15A$			1.5	V
Transition frequency	$f_T$	$V_{CE} = 10V, I_C = 0.5A, f = 10MHz$		30		MHz
Turn-on time	$t_{on}$	$I_C = 1A, I_{B1} = 0.1A, I_{B2} = -0.1A, V_{CC} = 50V$		0.5		$\mu s$
Storage time	$t_{stg}$			2.5		$\mu s$
Fall time	$t_f$			0.15		$\mu s$

\* $h_{FE2}$  Rank classification

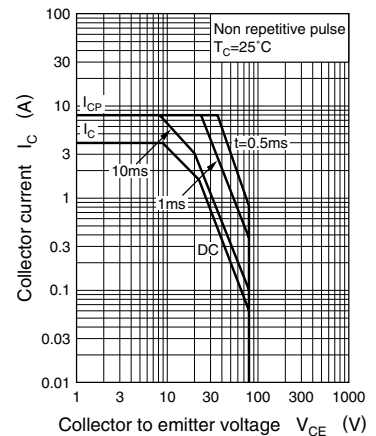
Rank	R	Q	P
$h_{FE2}$	60 to 120	90 to 180	130 to 260

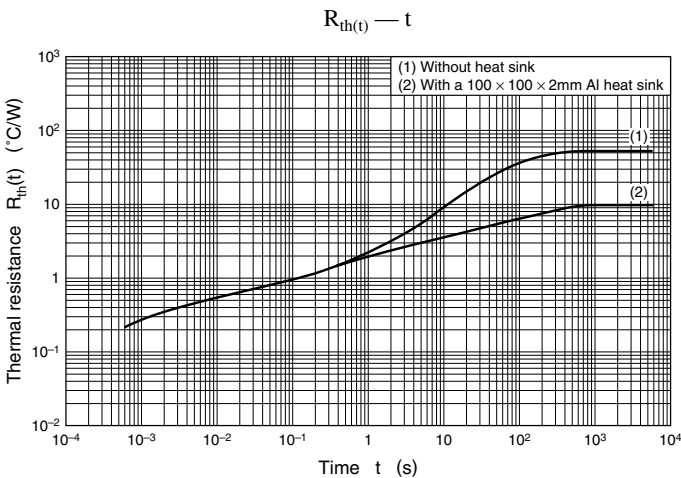


Note.) The Part number in the Parenthesis shows conventional part number.

$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$  $t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)





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