

# 2SD2528

## Silicon NPN epitaxial planar type

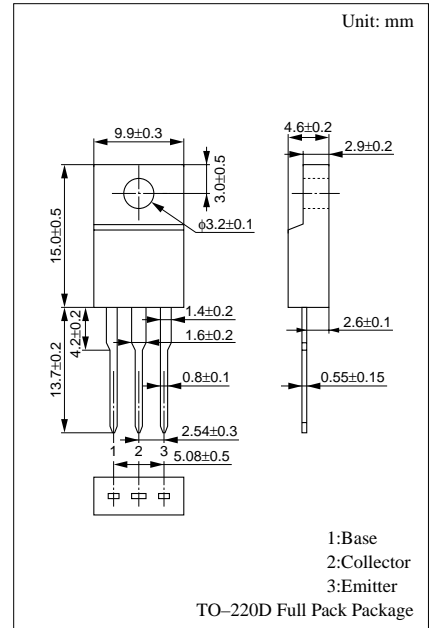
For power amplification with high forward current transfer ratio

### Features

- High forward current transfer ratio  $h_{FE}$
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$
- Full-pack package which can be installed to the heat sink with one screw

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

Parameter	Symbol	Rated	Unit
Collector to base voltage	$V_{CBO}$	80	V
Collector to emitter voltage	$V_{CEO}$	60	V
Emitter to base voltage	$V_{EBO}$	6	V
Peak collector current	$I_{CP}$	10	A
Collector current	$I_C$	5	A
Base current	$I_B$	1	A
Collector power dissipation	$P_C$	40	W
		2.0	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



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

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 80\text{V}, I_E = 0$			100	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 6\text{V}, I_C = 0$			100	$\mu\text{A}$
Collector to emitter voltage	$V_{CEO}$	$I_C = 25\text{mA}, I_B = 0$	60			V
Forward current transfer ratio	$h_{FE}^*$	$V_{CE} = 4\text{V}, I_C = 1\text{A}$	500		2000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 0.1\text{A}$			0.3	V
Transition frequency	$f_T$	$V_{CE} = 12\text{V}, I_C = 0.4\text{A}, f = 10\text{MHz}$		30		MHz
Turn-on time	$t_{on}$	$I_C = 4\text{A}, I_{B1} = 0.08\text{A}, I_{B2} = -0.08\text{A}, V_{CC} = 50\text{V}$		0.4		$\mu\text{s}$
Storage time	$t_{stg}$			2.0		$\mu\text{s}$
Fall time	$t_f$			0.6		$\mu\text{s}$

\* $h_{FE}$  Rank classification

Rank	P	Q
$h_{FE}$	800 to 2000	500 to 1200

