

isc Silicon NPN Power Transistor

2SC3528

DESCRIPTION

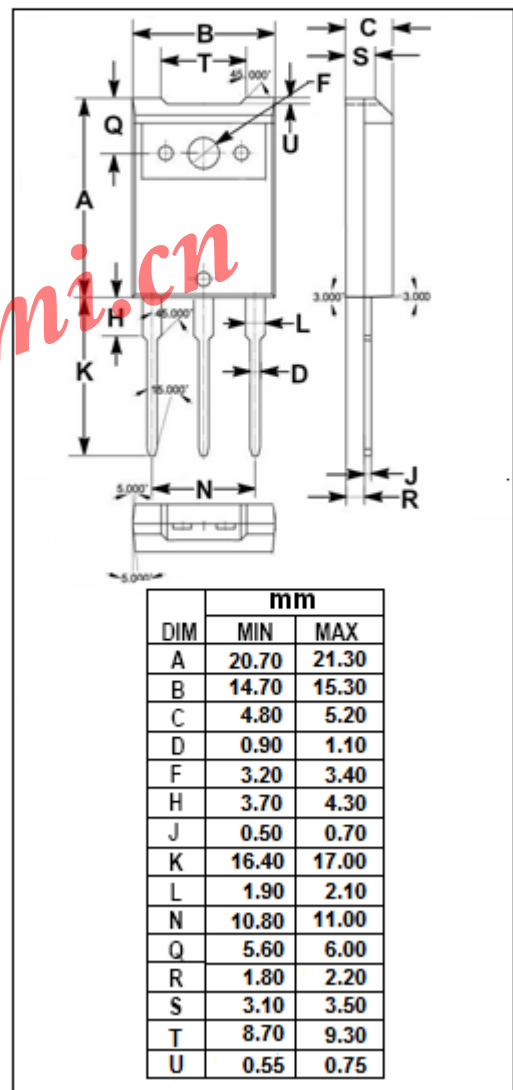
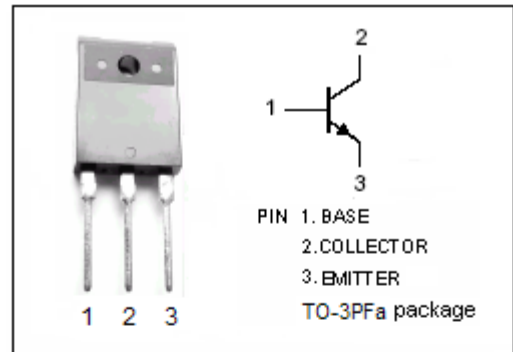
- Low Collector Saturation Voltage
- High Collector Current
- Good Linearity of  $h_{FE}$

APPLICATIONS

- Designed for switching regulator and high voltage switching applications.

ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base voltage	7	V
$I_C$	Collector Current-Continuous	20	A
$I_B$	Base Current-Continuous	6	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	125	W
	Collector Power Dissipation @ $T_a=25^{\circ}C$	3	
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.5\text{A}$ ; $L=25\text{mH}$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}$ ; $I_B=2\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}$ ; $I_B=2\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=500\text{V}$ ; $I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}$ ; $I_C=0$			100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=2\text{A}$ ; $V_{CE}=5\text{V}$	15			
$h_{FE-2}$	DC Current Gain	$I_C=10\text{A}$ ; $V_{CE}=5\text{V}$	10			
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}$ ; $V_{CE}=10\text{V}$ ; $f=1\text{MHz}$		15		MHz

## Switching times

$t_{on}$	Turn-On Time	$I_C=10\text{A}$ ; $I_{B1}=2.0\text{A}$ , $I_{B2}=-2.0\text{A}$ ; $V_{CC}=125\text{V}$			1.0	$\mu\text{s}$
$t_{stg}$	Storage Time				2.5	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$