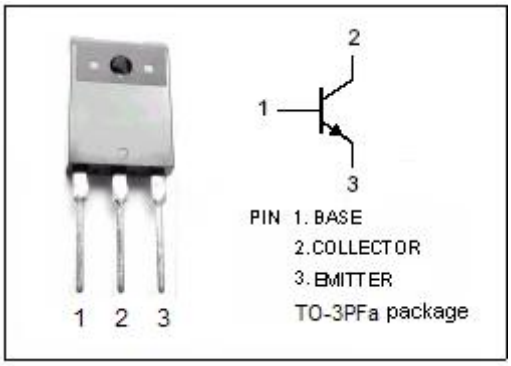
isc Silicon NPN Power Transistor — 2SC3528



DESCRIPTION

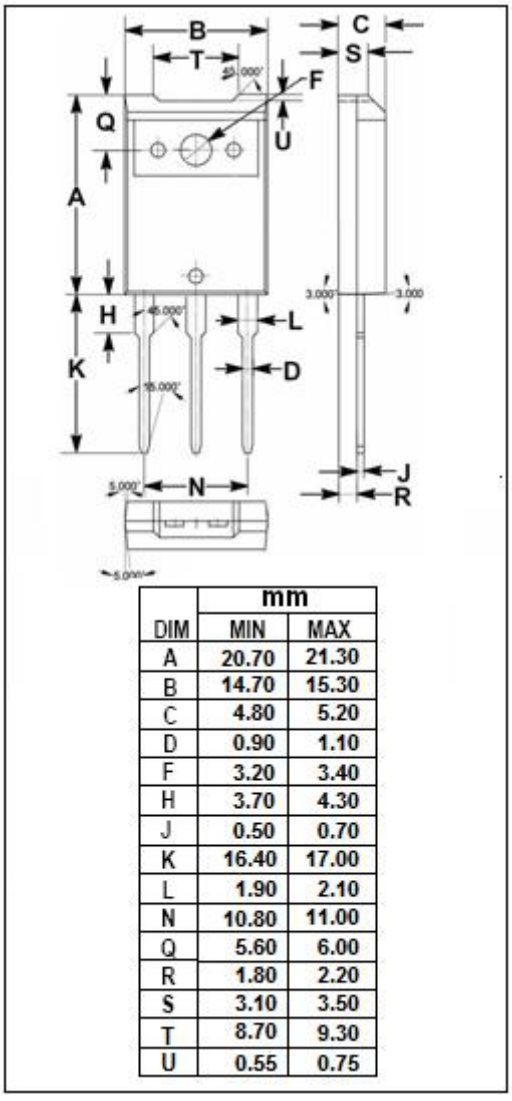
- Low Collector Saturation Voltage
- High Collector Current
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator and high voltage switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	125	W
	Collector Power Dissipation @ T_a=25℃	3	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	20.70	21.30
B	14.70	15.30
C	4.80	5.20
D	0.90	1.10
F	3.20	3.40
H	3.70	4.30
J	0.50	0.70
K	16.40	17.00
L	1.90	2.10
N	10.80	11.00
Q	5.60	6.00
R	1.80	2.20
S	3.10	3.50
T	8.70	9.30
U	0.55	0.75

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=20mA ; I_B=0	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V ; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			100	μA
h_{FE-1}	DC Current Gain	I_C= 2A ; V_{CE}= 5V	15			
h_{FE-2}	DC Current Gain	I_C= 10A ; V_{CE}= 5V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 1A ; V_{CE}= 10V; f= 1MHz		15		MHz
Switching times						
t_{on}	Turn-On Time	I_C= 10A; I_{B1}= 2.0A, I_{B2}= -2.0A; V_{CC}= 125V			1.0	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				1.0	μs