

isc Silicon NPN Power Transistor
3DD4515
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 400V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 10A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

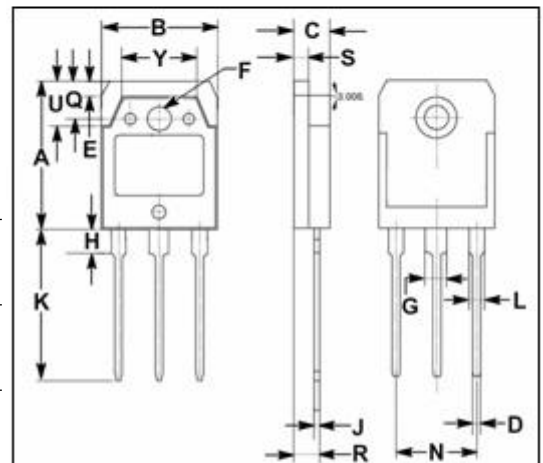
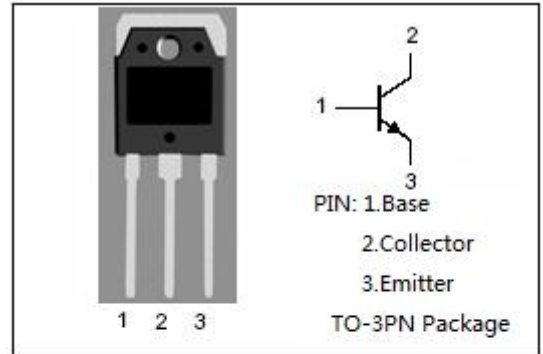
- Designed for power amplifier, high speed switching and regulated power supply applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	15	A
P_C	Collector Power Dissipation @ $T_C = 75^\circ\text{C}$	120	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.05	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	9			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C =10mA; I _B = 0	400			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	700			V
h _{FE1}	DC Current Gain	I _C = 2A; V _{CE} = 5V	15		50	
h _{FE2}	DC Current Gain	I _C = 5A; V _{CE} = 5V	10		45	
h _{FE3}	DC Current Gain	I _C = 10A; V _{CE} = 5V	8			
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
t _f	Fall Time	V _{CC} =24V, I _C =6A, I _{B1} =-I _{B2} =1.2A			0.7	μs
t _{stg}	Storage Time	V _{CC} =24V, I _C =6A, I _{B1} =-I _{B2} =1.2A			3	us
f _T	Current-Gain—Bandwidth Product	I _E = -0.5A ; V _{CE} = 10V	4			MHz

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