

DESCRIPTION

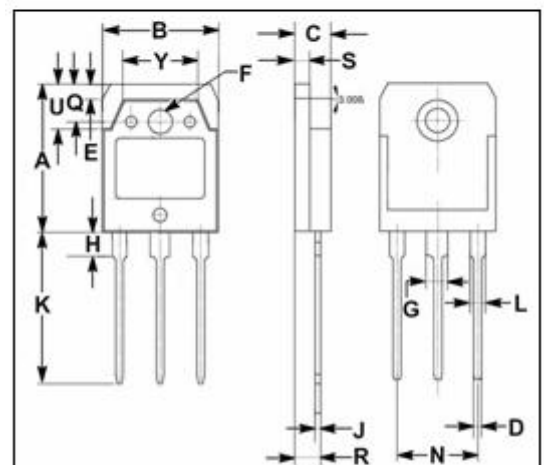
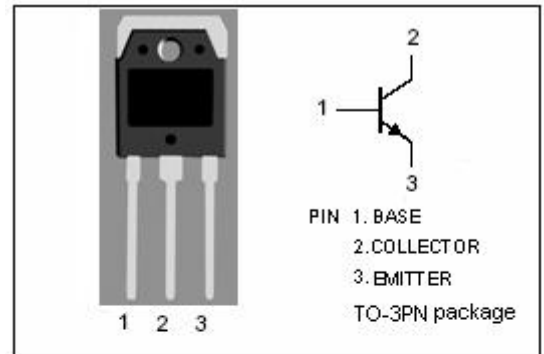
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.5V(\text{Max}) @ I_C = 3A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V (\text{Min})$
- Good Linearity of h_{FE}

APPLICATIONS

- Designed for use in humidifier , DC/DC converter and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Pulse	14	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	70	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	19.60	20.10
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	20.00	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	6.10
Y	9.90	10.10

ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA ; I _B = 0	120			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 200V; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0			100	μ A
h _{FE}	DC Current Gain	I _C = 3A ; V _{CE} = 4V	70		220	
f _T	Current-Gain—Bandwidth Product	I _E = 0.5A ; V _{CE} = 12V	20			MHz
C _{OB}	Output Capacitance	I _E =0 ; V _{CB} =10V;f _{test} =1.0MHz		110		pF

Switching times

t _{on}	Turn-on Time	I _C = 3A ; I _{B1} =0.3A; I _{B2} = -0.6A R _L = 16.7 Ω ; V _{CC} = 50V			0.5	μ s
t _{stg}	Storage Time				3.0	μ s
t _f	Fall Time				0.5	μ s

◆ **h_{FE} Classifications**

O	Y	G
70-120	100-200	160-220