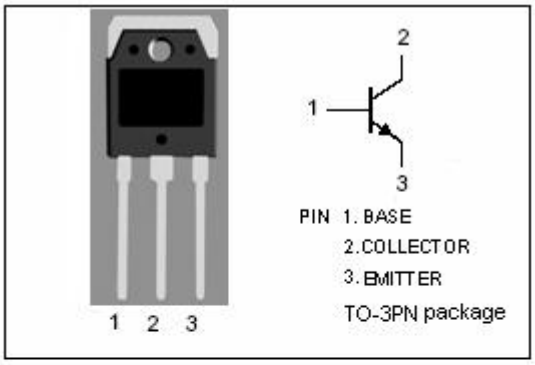
isc Silicon NPN Power Transistors — TIP55A

DESCRIPTION

- 50W at 100℃ case temperature
- 10A peak collector current
- High-voltage,high forward and reverse energy
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

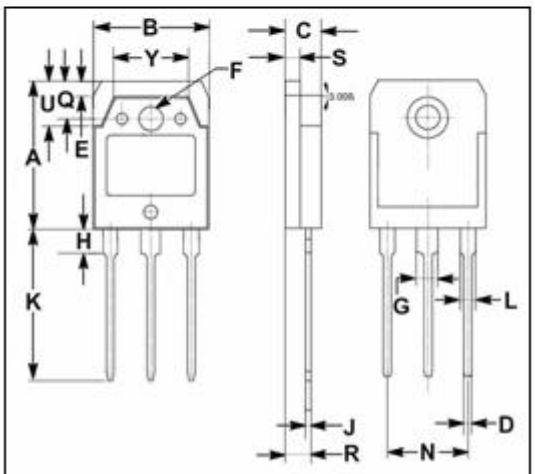


APPLICATIONS

- Designed for automotive ignition and switching regulator applications
- Characterized for operation in ignition and switching regulator Applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	350	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current -Continuous	7.5	A
I_{CM}	Collector Current-peak	10	A
I_B	Base Current	4	A
P_C	Collector Power Dissipation@ T_C=100℃	50	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1	℃/W

isc Silicon NPN Power Transistors — TIP55A

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$*	Collector-Emitter Sustaining Voltage	I_C= 20mA; I_B= 0	250		V
$V_{CE(sat)-1}$*	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 1A		1.2	V
$V_{CE(sat)-2}$*	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 4A		2.5	V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 1A		1.5	V
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		0.1	mA
h_{FE-1}*	DC Current Gain	I_C= 1A; V_{CE}= 2V	20	100	
h_{FE-2}*	DC Current Gain	I_C= 5A; V_{CE}=2V	6		

*:Pulse test PW≤300us,duty cycle≤1.5%