

isc Silicon NPN Power Transistor

2N6933/34/35

DESCRIPTION

- High Switching Speed
- High Voltage

APPLICATIONS

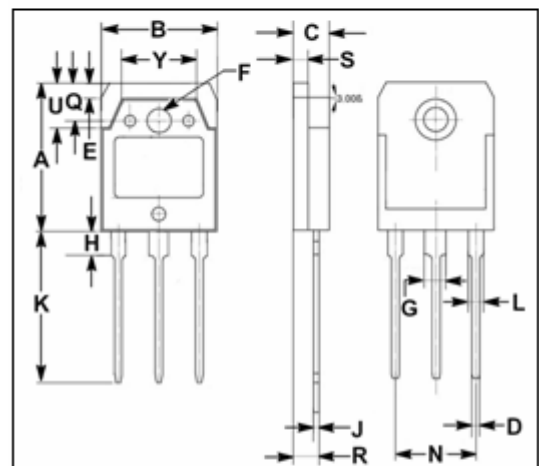
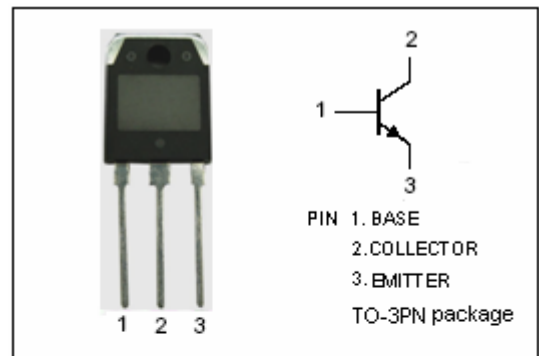
- Off-line power supplies
- High voltage inverters
- Switching regulators

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT	
V _{CEV}	Collector-Emitter Voltage (V _{BE} = -1.5V)	2N6933	450	V
		2N6934	550	
		2N6935	650	
V _{CEx}	Collector-Emitter Voltage	2N6933	350	V
		2N6934	400	
		2N6935	450	
V _{CEO}	Collector-Emitter Voltage	2N6933	300	V
		2N6934	350	
		2N6935	400	
V _{EBO}	Emitter-Base Voltage	8	V	
I _C	Collector Current-Continuous	15	A	
I _{CM}	Collector Current-Peak	23	A	
I _B	Base Current-Continuous	5	A	
I _{BM}	Base Current-Peak	7	A	
I _E	Emitter Current-Continuous	20	A	
I _{EM}	Emitter Current-Peak	30	A	
P _C	Collector Power Dissipation @ T _C =25°C	175	W	
T _J	Junction Temperature	150	°C	
T _{stg}	Storage Temperature Range	-65~150	°C	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.71	°C/W



DIM	mm	
	MIN	MAX
A	19.90	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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	2N6933	$I_C=0.2A; L=25mH$	300	V
		2N6934		350	
		2N6935		400	
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50mA; I_C=0$	8		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=15A; I_B=3A$ $I_C=15A; I_B=3A; T_C=100^\circ\text{C}$		1.0 2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=15A; I_B=3A$ $I_C=15A; I_B=3A; T_C=100^\circ\text{C}$		1.5 1.5	V
I_{CEV}	Collector Cutoff Current	$V_{CE}=V_{CEV}; V_{BE}=-1.5V$ $V_{CE}=V_{CEV}; V_{BE}=-1.5V; T_C=100^\circ\text{C}$		0.1 1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8V; I_C=0$		2.0	mA
h_{FE}	DC Current Gain	$I_C=15A; V_{CE}=3V$	8	35	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10V, f_{test}=1.0MHz$	150		pF

Switching Times; Resistive Load

t_d	Delay Time	$I_C=15A; I_{B1}=-I_{B2}=3A; R_L=20\Omega;$ $V_{BB}=-5V; V_{CC}=300V; t_p=30\mu s$		0.1	μs
t_r	Rise Time			0.7	μs
t_s	Storage Time			2.5	μs
t_f	Fall Time			0.5	μs