

isc Silicon NPN Power Transistor

2N6740

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min})$
- High Switching Speed
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

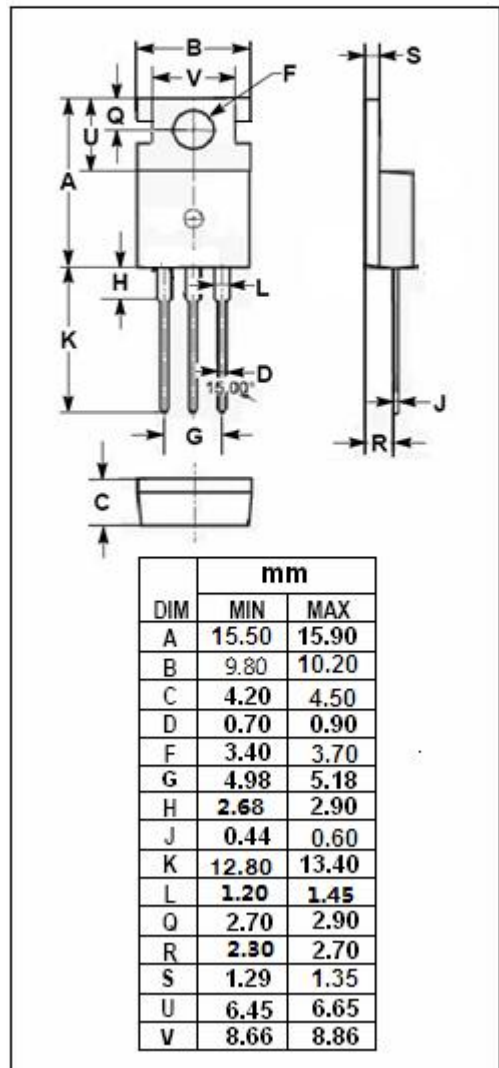
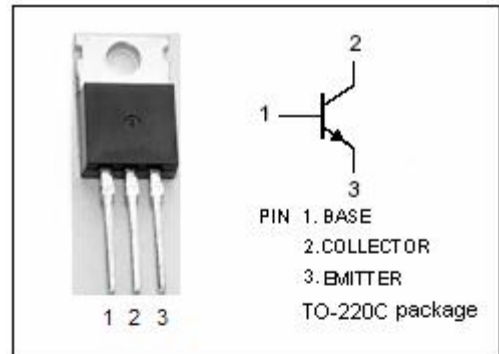
- Designed for use in high-voltage, high-speed , power switching in inductive circuit , they are particularly suited for 115 and 220V switchmode applications such as switching regulators, inverters, DC-DC and converter.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage- $V_{BE} = -1.5V$	650	V
V_{CEX}	Collector-Emitter Voltage- $V_{BE} = -1.5V$	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation $T_c=25^\circ\text{C}$	100	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	400		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 1\text{A}$		1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 8\text{A}; I_B= 4\text{A}$		2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 1\text{A}$		1.6	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 8\text{V}; I_C= 0$		2	mA
h_{FE}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 3\text{V}$	10	40	
f_T	Current-Gain—Bandwidth Product	$I_C= 0.2\text{A}; V_{CE}= 10\text{V}, f_{test}= 1\text{MHz}$	10		MHz

Switching Times; Resistive Load

t_d	Delay Time	$I_C= 5\text{A}; I_{B1}= -I_{B2}= 1\text{A}, V_{CC}= 125\text{V};$ $t_p= 20\ \mu\text{s}, \text{Duty Cycle} \leq 1\%$		0.1	μs
t_r	Rise Time			0.4	μs
t_s	Storage Time			2.5	μs
t_f	Fall Time			0.5	μs

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