

isc Silicon NPN Power Transistor

2N6740

DESCRIPTION

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

APPLICATIONS

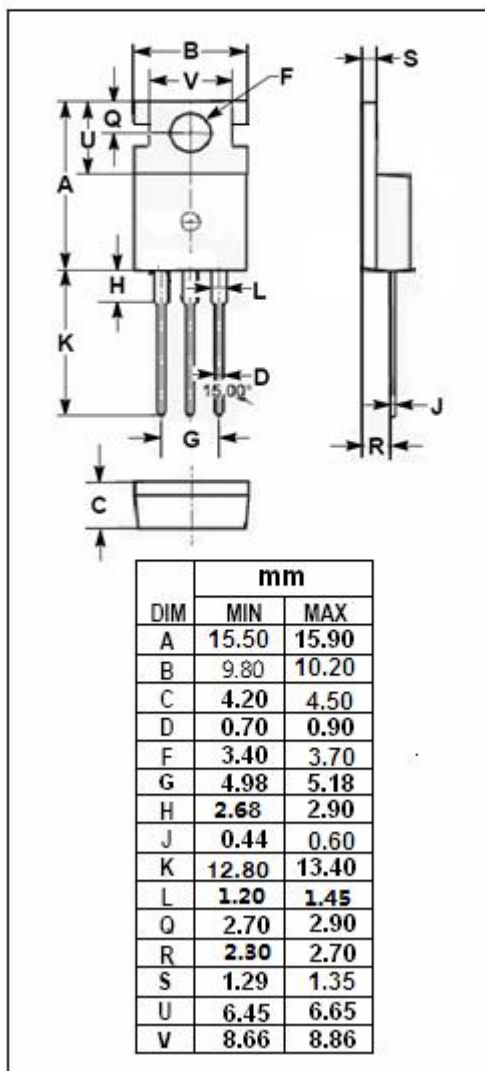
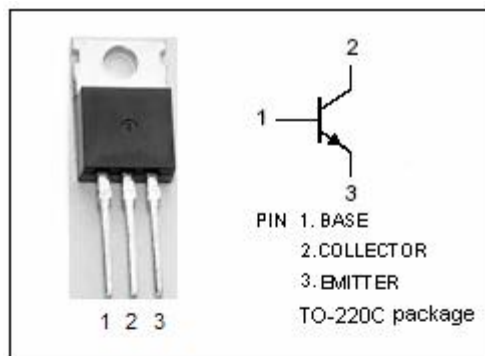
- Designed for use in high-voltage, high-speed , power switching in inductive circuit , they are particularly suited for 115 and 220V switchmode applications such as switching regulators, inverters, DC-DC and converter.

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	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**2N6740****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	400		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 1A		1	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 4A		2	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 1A		1.6	V
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0		2	mA
h _{FE}	DC Current Gain	I _C = 5A ; V _{CE} = 3V	10	40	
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A; V _{CE} = 10V, f _{test} = 1MHz	10		MHz

Switching Times; Resistive Load

t _d	Delay Time	I _C = 5A; I _{B1} = -I _{B2} = 1A, V _{CC} = 125V; t _p = 20 μs, Duty Cycle ≤ 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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