

**isc Silicon NPN Power Transistors**
**2N6773**
**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**

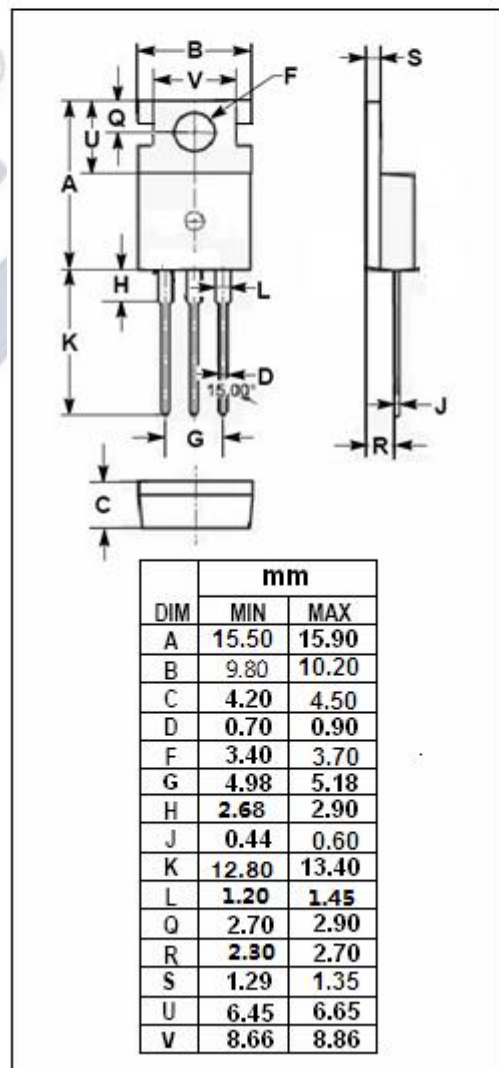
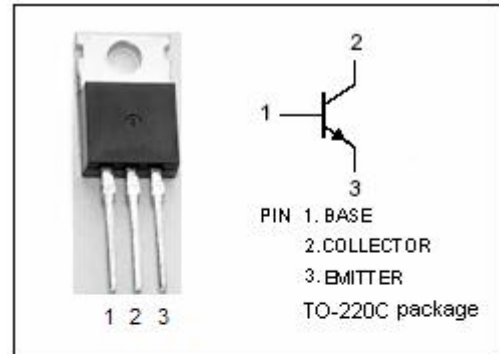
- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	650	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	1	A
$I_{CM}$	Collector Current-Peak	3	A
$P_C$	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	40	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$



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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA} ; I_B= 0$	400			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E= 1\text{mA} ; I_C= 0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 1\text{A} ; I_B= 0.2\text{A}$ $I_C= 1\text{A} ; I_B= 0.2\text{A}, T_C= 125^\circ\text{C}$			1.0 2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 1\text{A} ; I_B= 0.2\text{A}$			1.6	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 1\text{A} ; V_{CE}= 3\text{V}$			1.5	V
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 6\text{V} ; I_C=0$			100	$\mu\text{A}$
$I_{CBO}$	Collector Cutoff Current	$V_{CB}= 650\text{V} ; I_E= 0$			100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C= 1\text{A} ; V_{CE}= 3\text{V}$	10		50	
$C_{OB}$	Output Capacitance	$I_E= 0 ; V_{CB}= 10\text{V} ; f_{test}=1\text{MHz}$	50			pF
$f_T$	Current-Gain—Bandwidth Product	$I_C= 0.5\text{A} ; V_{CE}= 10\text{V}$	10			MHz

## Switching Times

$t_d$	Delay Time	$I_C= 1\text{A} ; I_{B1}= -I_{B2}= 0.2\text{A}$			0.1	$\mu\text{s}$
$t_r$	Rise Time				0.5	$\mu\text{s}$
$t_{stg}$	Storage Time				2.5	$\mu\text{s}$
$t_f$	Fall Time				0.4	$\mu\text{s}$

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