

**isc Silicon NPN Power Transistor**
**2N3773**
**DESCRIPTION**

- Excellent Safe Operating Area
- High DC Current Gain- $h_{FE}=15(\text{Min})@I_C = 8\text{A}$
- Low Saturation Voltage-  
:  $V_{CE(\text{sat})}= 1.4\text{V}(\text{Max})@ I_C = 8\text{A}$
- Complement to Type 2N6609
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

**APPLICATIONS**

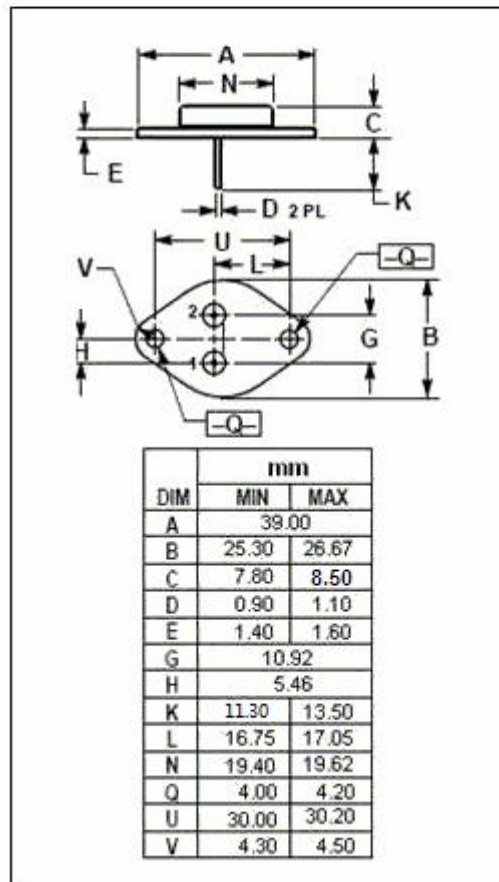
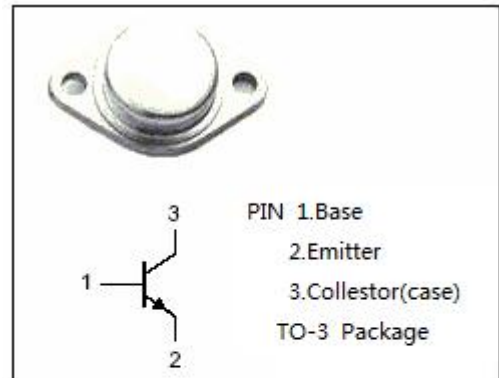
- Designed for high power audio ,disk head positioners and other linear applications, which can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	160	V
$V_{CEX}$	Collector-Emitter Voltage	160	V
$V_{CEO}$	Collector-Emitter Voltage	140	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	16	A
$I_{CP}$	Collector Current-Peak	30	A
$I_B$	Base Current-Continuous	4	A
$I_{BP}$	Base Current-Peak	15	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	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	1.17	$^\circ\text{C}/\text{W}$



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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$ ; $I_B=0$	140		V
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$ ; $V_{BE(off)}=1.5\text{V}$ ; $R_{BE}=100\Omega$	160		V
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}$ ; $R_{BE}=100\Omega$	150		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}$ ; $I_B=0.8\text{A}$		1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=16\text{A}$ ; $I_B=3.2\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=8\text{A}$ ; $V_{CE}=4\text{V}$		2.2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=120\text{V}$ ; $I_B=0$		10	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7.0\text{V}$ ; $I_C=0$		5	mA
$h_{FE-1}$	DC Current Gain	$I_C=8\text{A}$ ; $V_{CE}=4\text{V}$	15	60	
$h_{FE-3}$	DC Current Gain	$I_C=16\text{A}$ ; $V_{CE}=4\text{V}$	5		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	$V_{CE}=100\text{V}$ , $t=1.0\text{s}$ , Nonrepetitive	1.5		A

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