

SPTECH 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

APPLICATIONS

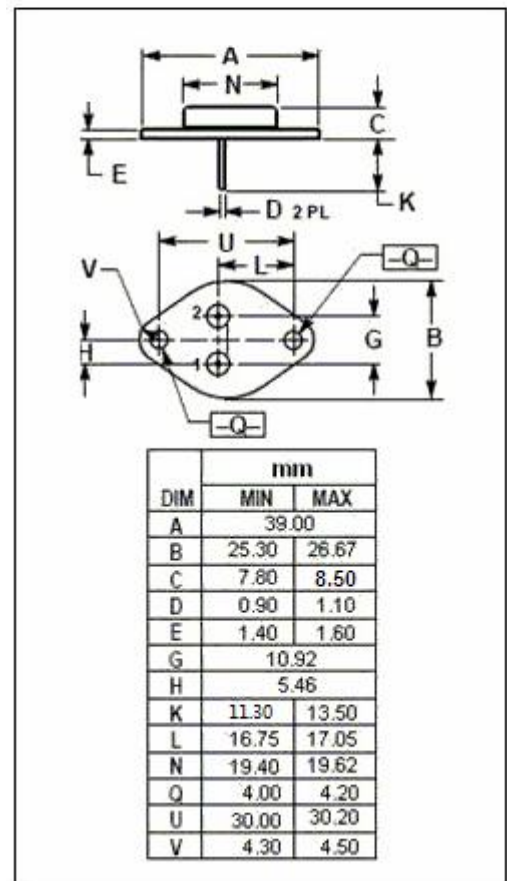
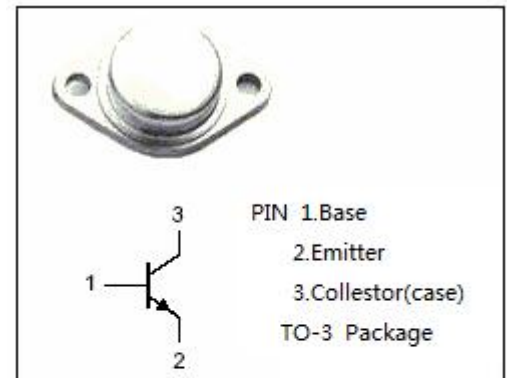
- Designed for high power audio ,disk head positioners and other linear applications, which can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.

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



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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	$I_C=50\text{mA}$; $I_B=0$	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