### **SPTECH Silicon NPN Power Transistor**

2N3773

#### **DESCRIPTION**

- Excellent Safe Operating Area
- High DC Current Gain-h<sub>FE</sub>=15(Min)@I<sub>C</sub> = 8A
- · Low Saturation Voltage-
  - : V<sub>CE(sat</sub>)= 1.4V(Max)@ I<sub>C</sub> = 8A
- Complement to Type 2N6609

#### **APPLICATIONS**

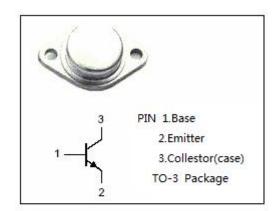
 Designed for high power audio ,disk head positioners and other linear applications, which can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters or inverters.

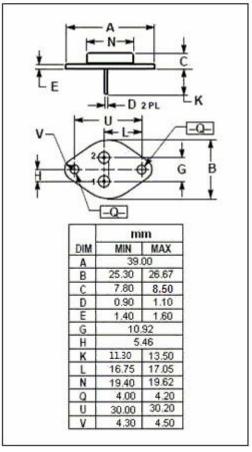
## **ABSOLUTE MAXIMUM RATINGS(Ta=25℃)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage 160		V
V <sub>CEX</sub>	Collector-Emitter Voltage	160	V
V <sub>CEO</sub>	Collector-Emitter Voltage	140	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
Ic	Collector Current-Continuous	16	Α
I <sub>CP</sub>	Collector Current-Peak	30	А
I <sub>B</sub>	Base Current-Continuous	4	Α
I <sub>BP</sub>	Base Current-Peak		А
Pc	Collector Power Dissipation @T <sub>C</sub> =25℃	Γ <sub>C</sub> =25℃ 150	
TJ	Junction Temperature	150	$^{\circ}$ C
T <sub>stg</sub>	Storage Temperature	-65~150	$^{\circ}$ C

#### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth j-c	Thermal Resistance,Junction to Case	1.17	°C/W





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### **ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25℃ unless otherwise specified

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

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