

SPTECH Silicon NPN Power Transistor

2N6360

DESCRIPTION

- Excellent Safe Operating Area
- High DC Current Gain-
: $h_{FE}=15-60(\text{Min})@I_C = 6A$
- Low Saturation Voltage-
: $V_{CE(\text{sat})}= 1.4V(\text{Max})@ I_C = 6A$

APPLICATIONS

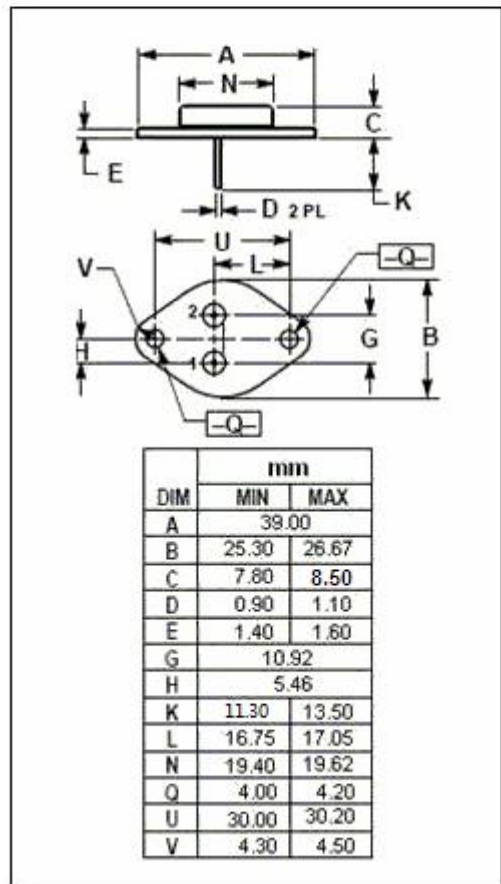
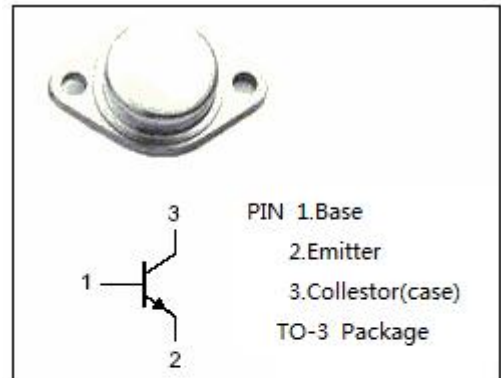
- Designed for high power applications and switching circuits such as relay or solenoid drivers, DC-DC converters or Inverters.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	12	A
I_{CM}	Collector Current-Peak	24	A
I_B	Base Current-Continuous	4	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
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	100		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 6\text{A}; I_B= 0.6\text{A}$		1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 12\text{A}; I_B= 2.4\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 6\text{A}; V_{CE}= 4\text{V}$		2.2	V
I_{CEO}	Collector Cutoff Current	$V_{CE}= 100\text{V}; I_B= 0$		2.0	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}= 120\text{V}; V_{BE(off)}= 1.5\text{V}$ $V_{CE}= 120\text{V}; V_{BE(off)}= 1.5\text{V}, T_C=150^{\circ}\text{C}$		2.0 10	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 7\text{V}; I_C=0$		5.0	mA
h_{FE-1}	DC Current Gain	$I_C= 6\text{A}; V_{CE}= 4\text{V}$	15	60	
h_{FE-2}	DC Current Gain	$I_C= 12\text{A}; V_{CE}= 4\text{V}$	5		
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}; V_{CE}= 4\text{V}$	0.2		MHz