

**isc Silicon NPN Power Transistor**
**ISCM1897**
**DESCRIPTION**

- Fast turn-off times
- Operating temperature range -65~200°C
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

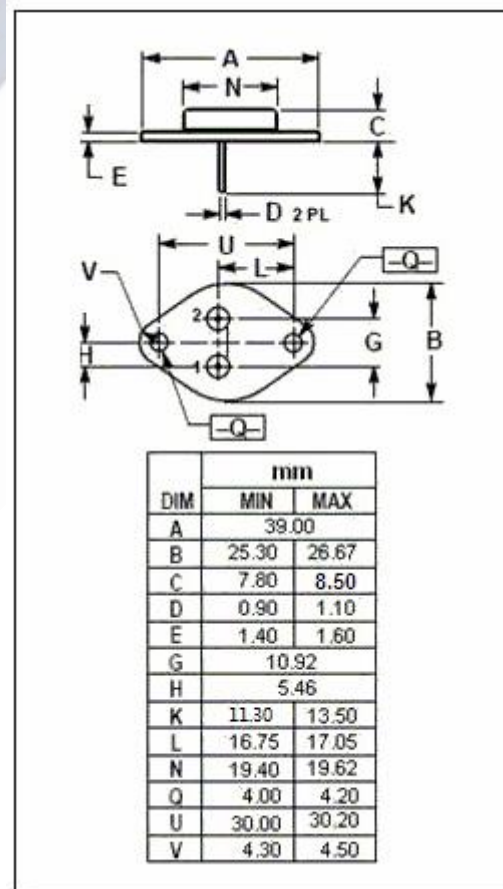
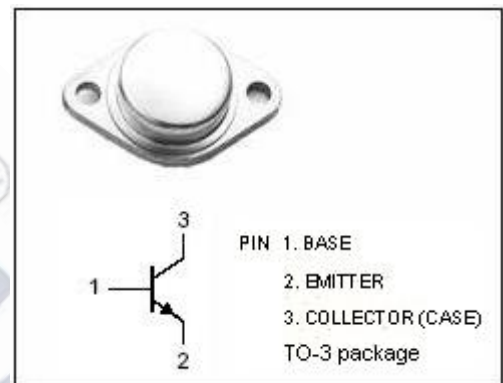
- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector- Base Voltage	1500	V
V <sub>CEO(SUS)</sub>	Collector-Emitter Voltage	800	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current-Continuous	10	A
I <sub>CM</sub>	Collector Current-Peak	15	A
I <sub>B</sub>	Base Current-Continuous	8	A
I <sub>BM</sub>	Base Current-Peak	12	A
P <sub>C</sub>	Collector Power Dissipation@T <sub>c</sub> =25°C	175	W
T <sub>J</sub>	Junction Temperature	-65~200	°C
T <sub>stg</sub>	Storage Temperature	-65~200	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance,Junction to Case	1.0	°C/W



**isc Silicon NPN Power Transistor****ISCM1897****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	$I_C=50\text{mA}$ ; $I_B=0$	80			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}$ ; $I_B=2\text{A}$			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}$ ; $I_B= 5\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 5\text{A}$ ; $I_B= 2\text{A}$			1.5	V
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 6\text{V}$ ; $I_C=0$			0.1	mA
$h_{FE}$	DC Current Gain	$I_C= 5\text{A}$ ; $V_{CE}= 5\text{V}$	4			
$C_{OB}$	Output Capacitance	$I_E= 0$ ; $V_{CB}= 10\text{V}$ ; $f_{test}=1.0\text{kHz}$			450	pF

\*:Pulse test:Pulse width $\leq 300\mu\text{s}$ ,duty cycle $\leq 2\%$