

isc Silicon NPN Power Transistor**2N6835****DESCRIPTION**

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min})$
- High Switching Speed

APPLICATIONS

- Designed for high-voltage ,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line operated switch-mode applications.

Typical applications:

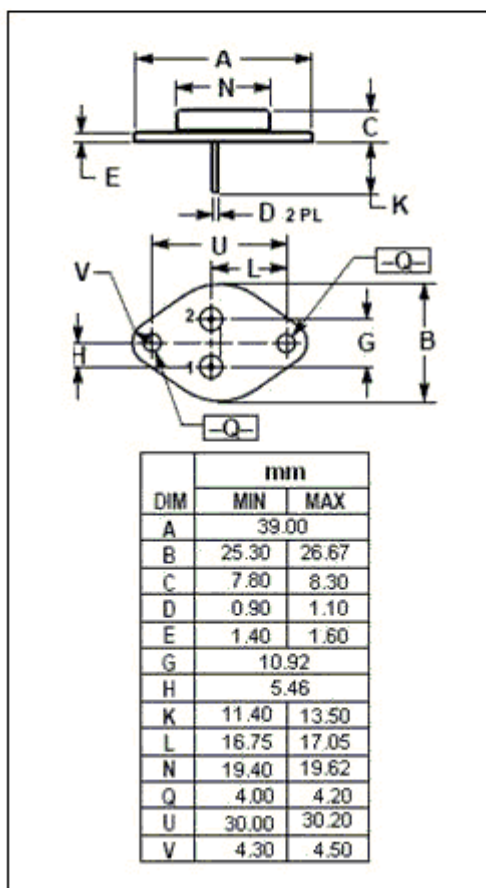
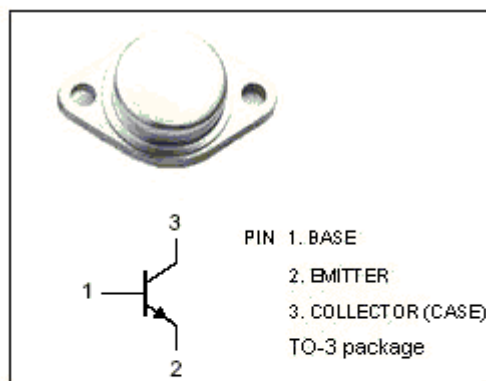
- Switching regulators
- Inverters
- Motor controls
- Deflection circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	850	V
$V_{CEQ(SUS)}$	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	16	A
I_B	Base Current-Continuous	6	A
I_{BM}	Base Current-Peak	12	A
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	150	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1.17	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2N6835****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C =100mA ; I _B =0	450			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.4A			1.2	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.66A I _C = 5A; I _B = 0.66A, T _C =100°C			2.5 3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.66A I _C = 5A; I _B = 0.66A, T _C =100°C			1.5 1.5	V
I _{CEV}	Collector Cutoff Current	V _{CEV} = 850V; V _{BE(off)} = 1.5V V _{CEV} = 850V; V _{BE(off)} = 1.5V; T _C =100°C			0.25 1.5	mA
I _{CER}	Collector Cutoff Current	V _{CE} = 850V; R _{BE} = 50 Ω, T _C = 100°C			2.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6.0V; I _C =0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 5A ; V _{CE} = 5V	7.5		30	
h _{FE-2}	DC Current Gain	I _C = 8A ; V _{CE} = 5V	4			
f _T	Current Gain-Bandwidth Product	I _C = 0.25A ; V _{CE} = 10V; f _{test} =10MHz	10		75	MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} =1.0kHz	50		350	pF

Switching times;Resistive Load

t _d	Delay Time	I _C = 5A , V _{CC} = 250V; I _{B1} = 0.66A; I _{B2} = -1.3A; P _W = 30 μ s; R _{B2} = 4 Ω Duty Cycle ≤2.0%		20	50	ns
t _r	Rise Time			85	250	ns
t _s	Storage Time			1000	2500	ns
t _f	Fall Time			70	250	ns