Silicon NPN Power Transistors MJW16018

DESCRIPTION

·With TO-247 package
·High voltage ,high speed

APPLICATIONS

·Switching Regulators
·Inverters
·Solenoids
·Relay Drivers
·Motor Controls
·Deflection Circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

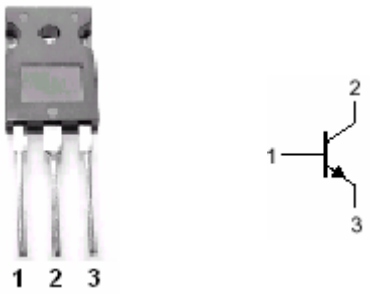

Fig.1 simplified outline (TO-247) and symbol

ABSOLUTE MAXIMUM RATINGS(T_C=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		10	A
I_{CM}	Collector current-Peak		15	A
I_B	Base current		8	A
I_{BM}	Base current-Peak		12	A
P_D	Total power dissipation	T_C=25□ T_C=100□	125 50	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance junction to case	1.0	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=50mA; I_B=0	800			V
$V_{CE(sat)-1}$	Collector-emitter saturation voltage	I_C=5A ;I_B=2A T_C=110□			1.0 1.5	V
$V_{CE(sat)-2}$	Collector-emitter saturation voltage	I_C=10A ;I_B=5A			5.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=5A ;I_B=2A T_C=110□			1.5 1.5	V
I_{CEV}	Collector cut-off current	V_{CEV}=1500V,$V_{BE(off)}$=1.5Vdc T_C=100□			0.25 1.50	mA
I_{CER}	Collector cut-off current	V_{CE}=1500V; R_{BE}=50Ω T_C=100□			2.5	mA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			0.1	mA
h_{FE}	DC current gain	I_C=5A ; V_{CE}=5V	4			
C_{OB}	Collector outoput capacitance	I_E=0;f=1kHz ; V_{CB}=10V			450	pF

Switching times resistive load

t_d	Delay time	I_C=5A; I_{B1}= I_{B2}=2.0A V_{CC}=250V ,R_{B2}=3Ω PW=25μs Duty Cycle≤2%		0.085	0.2	μs
t_r	Rise time			0.90	2.0	μs
t_s	Storage time			4.5	9.0	μs
t_f	Fall time			0.2	0.4	μs

PACKAGE OUTLINE

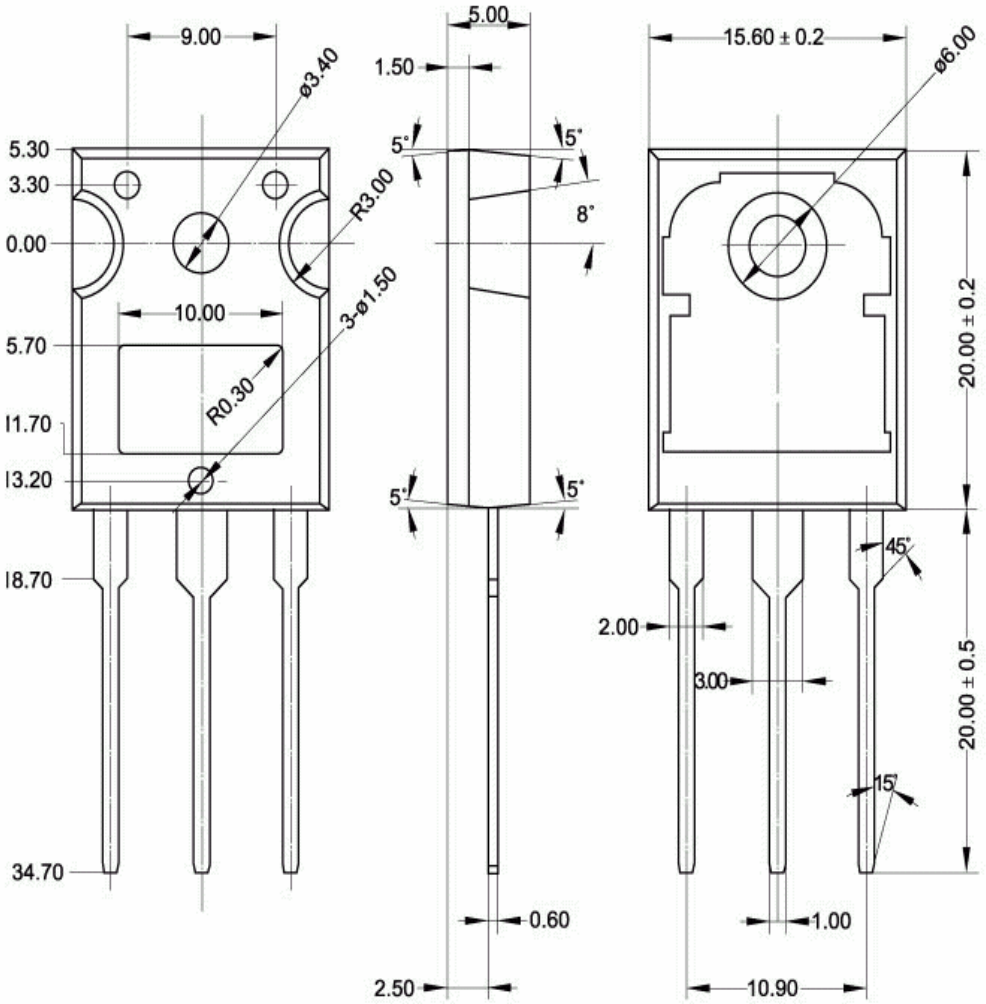

Fig.2 Outline dimensions