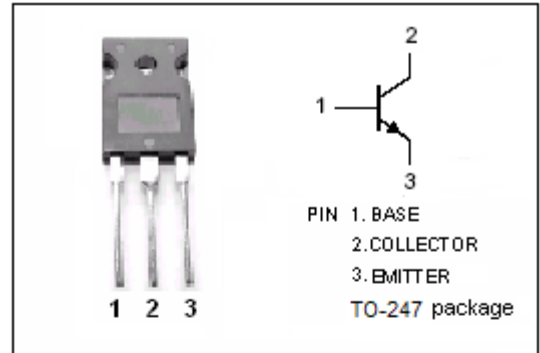


DESCRIPTION

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

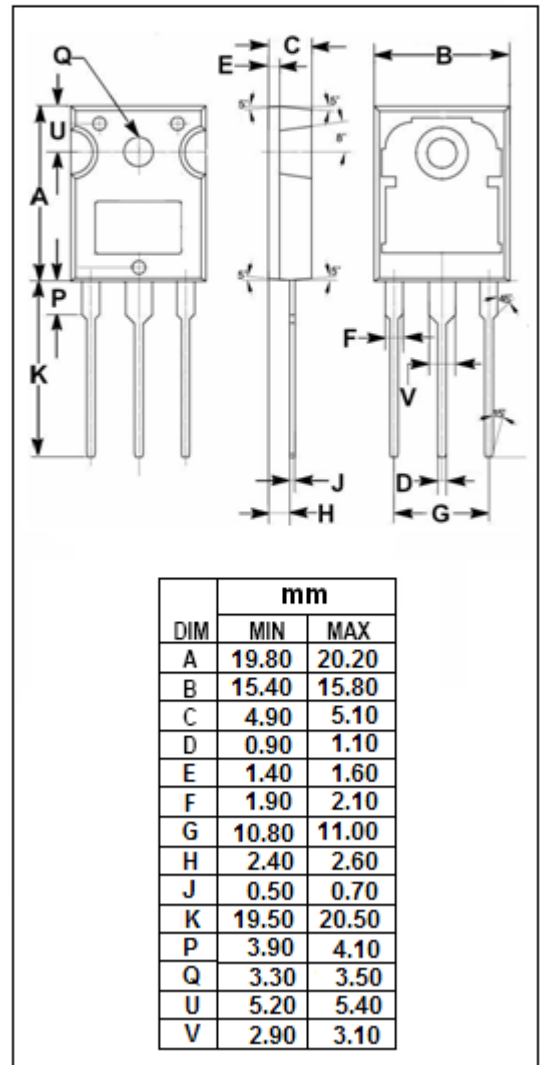
APPLICATIONS

- Designed for switching regulator and general purpose applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	20	A
I_{CM}	Collector Current-Peak	40	A
I_B	Base Current-Continuous	7	A
I_{BM}	Base Current-Peak	14	A
P_C	Collector Power Dissipation @ $T_C=25$	150	W
T_J	Junction Temperature	150	
T_{stg}	Storage Temperature Range	-55~150	



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.83	/W

Silicon NPN Power Transistor

2SC4060

ELECTRICAL CHARACTERISTICS

$T_C=25$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 0.2A; I_B= 0$	450			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 10A; I_B= 2A$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 10A; I_B= 2A$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 600V; I_E= 0$			0.1	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 450V; I_B= 0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 7V; I_C= 0$			0.1	mA
h_{FE-1}	DC Current Gain	$I_C= 10A; V_{CE}= 5V$	10			
h_{FE-2}	DC Current Gain	$I_C= 1mA; V_{CE}= 5V$	5			
f_T	Current-Gain—Bandwidth Product	$I_C= 2A; V_{CE}= 10V$		20		MHz

Switching Times

t_{on}	Turn-on Time	$I_C= 10A, I_{B1}= 2A; I_{B2}= -4A$ $R_L= 15 \Omega ; V_{BB2}= 4V$			0.5	μs
t_{stg}	Storage Time				2.0	μs
t_f	Fall Time				0.2	μs