

isc Silicon NPN Power Transistor

2SC6076

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 160V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.5V(\text{Max}) @ I_C = 1A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

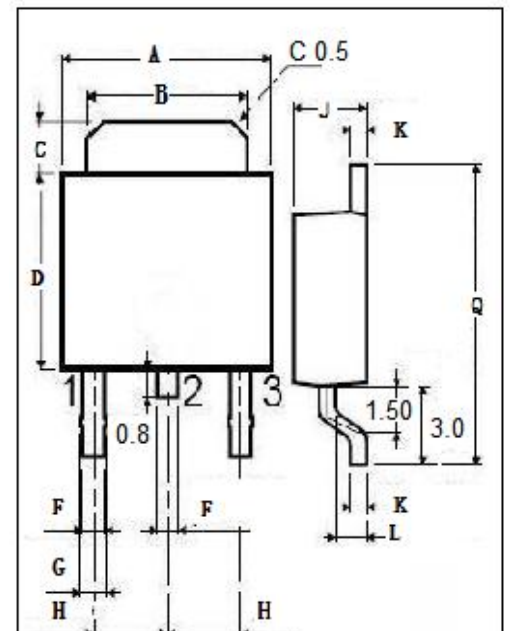
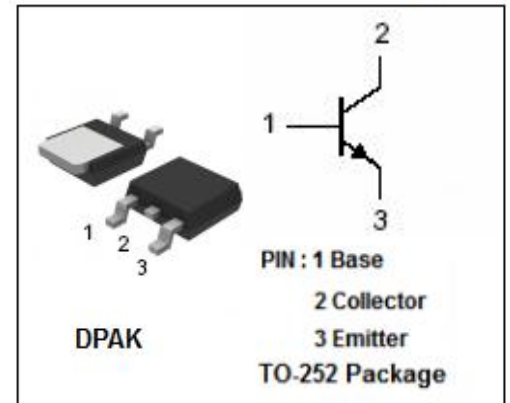
- Power Amplifier Applications
- Power Switching Applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	3.0	A
I_{CM}	Collector Current-Peak	5.0	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	10	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	4.16	$^\circ\text{C/W}$



DIM	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	160			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA ; I _C = 0	9			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 0.5A; I _B =50mA			0.3	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B =100mA			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B =100mA			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} =160V ; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 9V ; I _C = 0			1.0	μ A
h _{FE}	DC Current Gain	I _C = 1mA ; V _{CE} = 2V	150			
		I _C = 0.5A ; V _{CE} = 2V	180		450	
		I _C = 1A ; V _{CE} = 2V	100			

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