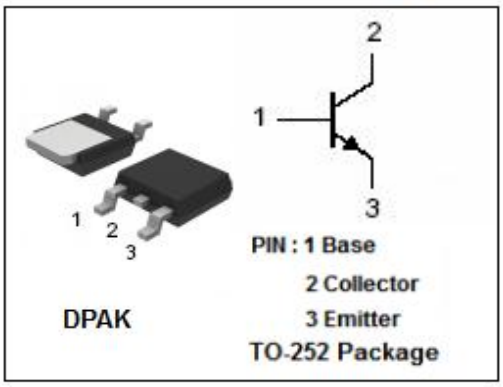
isc Silicon NPN Power Transistor — 2SC6097

DESCRIPTION

- Large current capacitance
- High-speed switching
- High allowable power dissipation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

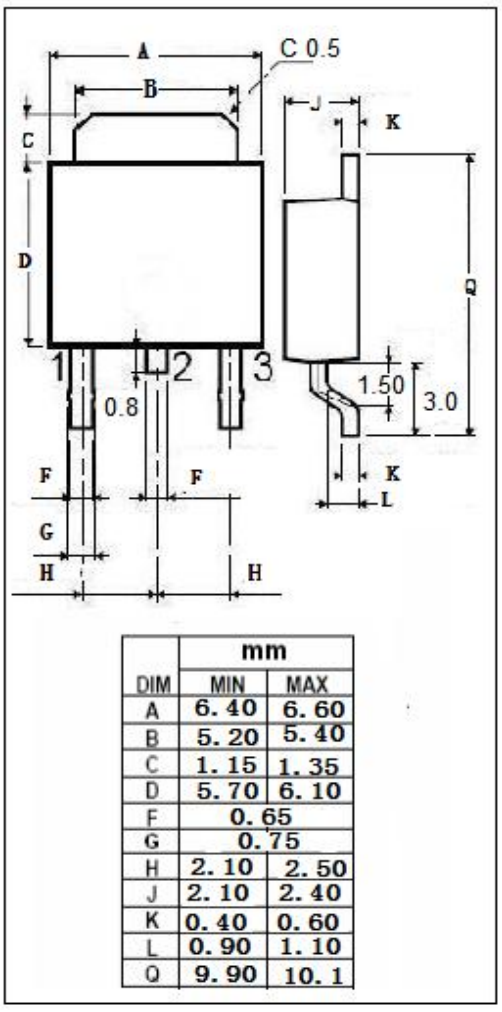


APPLICATIONS

- DC-DC converter,relay drivers,lamp drivers,motor drivers, inverter

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6.5	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	5	A
I_B	Base Current-Continuous	0.6	A
P_C	Collector Power Dissipation @ T_C=25℃	15	W
	Collector Power Dissipation @T_a=25℃	0.8	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm 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℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 50mA			0.15	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 100mA			0.135	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 100mA			1.2	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 1mA; I_B= 0	50			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 10uA; I_C= 0	6.5			V
I_{CBO}	Collector Cutoff Current	V_{CB}= 50V; I_E= 0			1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 4V; I_C= 0			1	μA
h_{FE}	DC Current Gain	I_C= 0.1A; V_{CE}= 2V	300		600	
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1.0MHz		18		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 10V		390		MHz