

isc Silicon NPN Power Transistor

2SC5707

DESCRIPTION

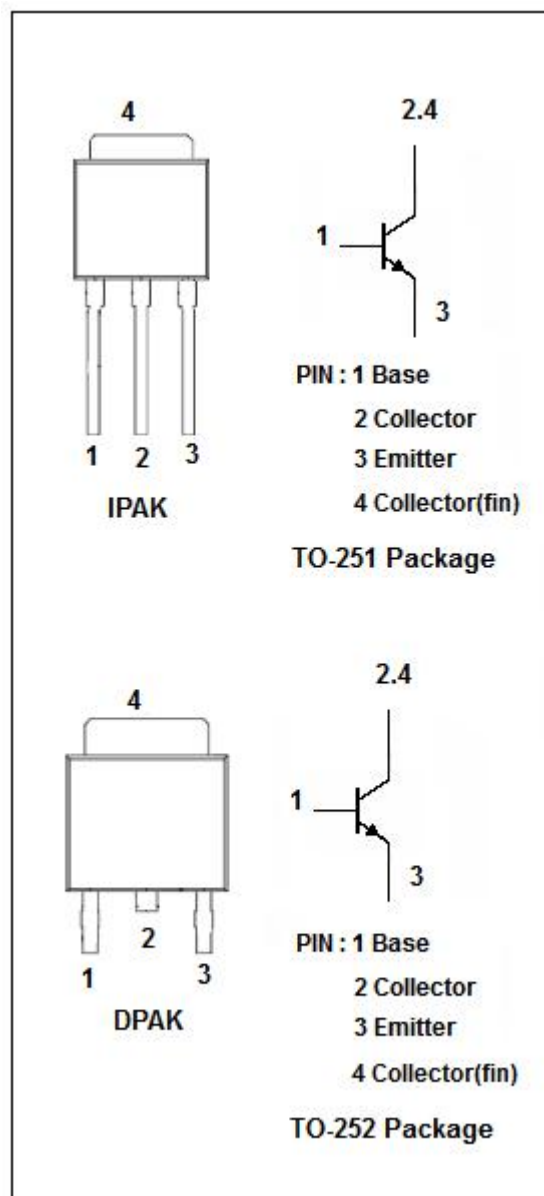
- Large current capacitance
- High-speed switching
- 100% avalanche tested
- Low collector-to-emitter saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation
- Complementary to 2SA2040

APPLICATIONS

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

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	11	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	15	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.0	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



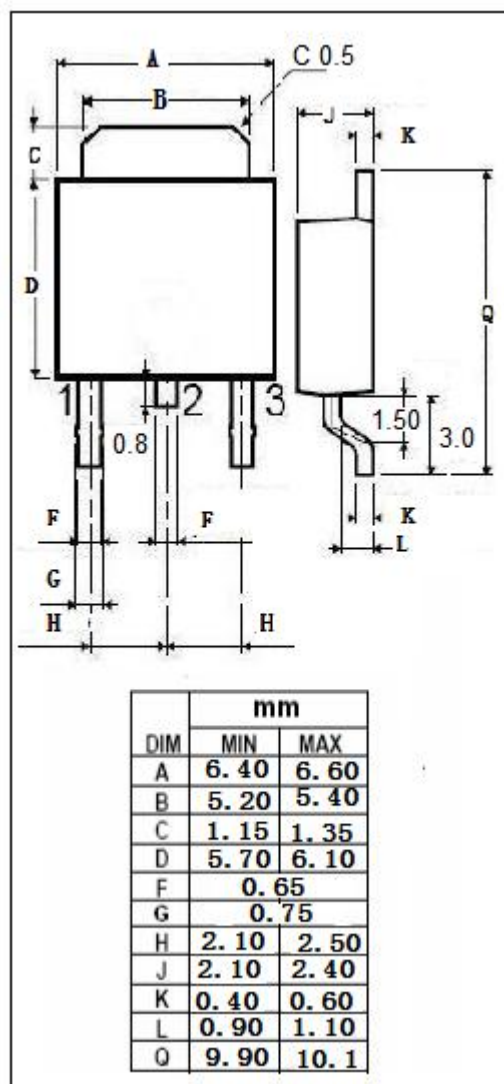
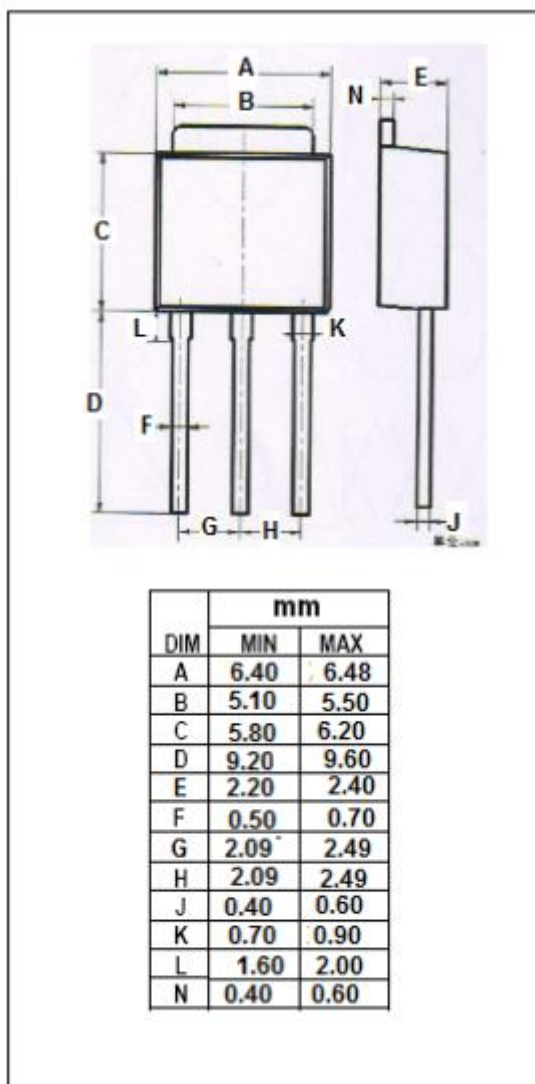
isc Silicon NPN Power Transistor**2SC5707****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)} -1	Collector-Emitter Saturation Voltage	I _C = 3.5A; I _B = 175mA			0.24	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 2.0A; I _B = 40mA			0.17	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2.0A; I _B = 40mA			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			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 0.5A; V _{CE} = 2V	200		560	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1.0MHz		28		pF
f _T	Current-Gain—Bandwidth Product	I _C = 500mA; V _{CE} = 10V		330		MHz

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Outline Drawing



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