

isc Silicon NPN Power Transistor
2SD1918
DESCRIPTION

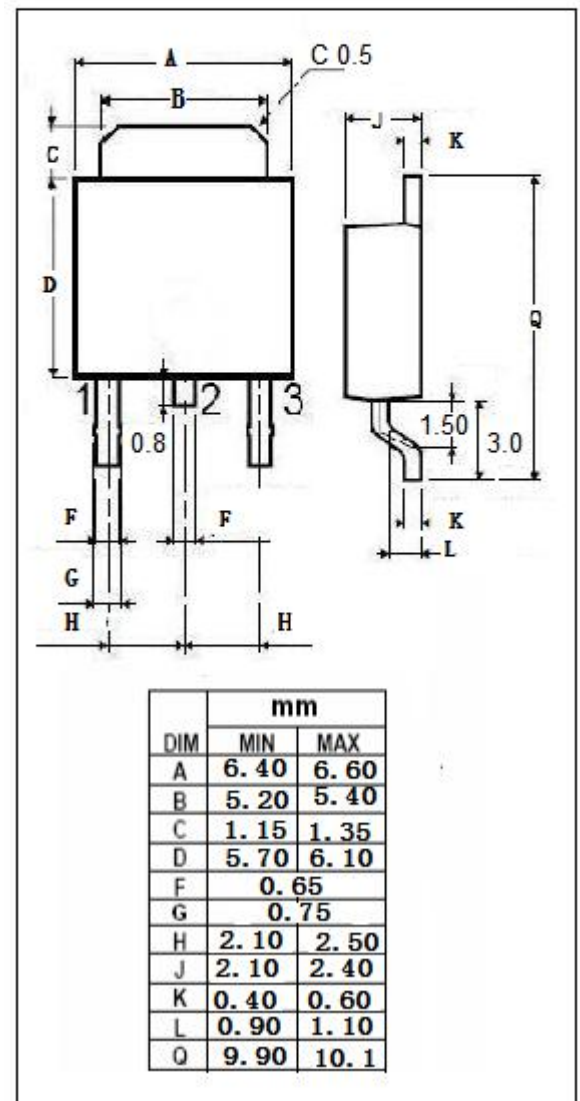
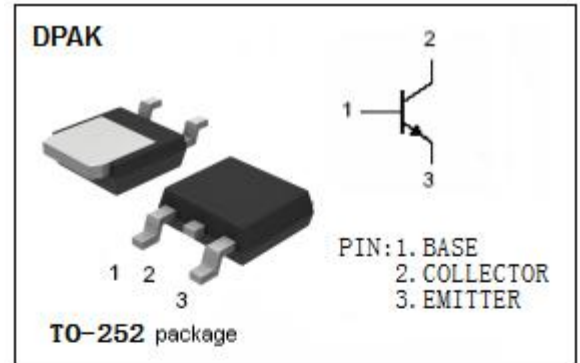
- High f_T : $f_T=80\text{MHz(TYP)}$
- High Collector-Emitter Breakdown Voltage:
: $V_{(BR)CEO}=160\text{V(Min)}$
- Excellent linearity of h_{FE}
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Motor drivers, LED driver, Power supply

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	5	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Peak	3.0	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	10	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 50uA; I _B = 0	160			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA; I _B = 0	160			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50uA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.1A			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.1A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} =4V; I _C = 0			1.0	μ A
h _{FE}	DC Current Gain	I _C = 0.1A; V _{CE} = 5V	120		390	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1.0MHz		20		pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A; V _{CE} = 5V, f= 30MHz		80		MHz

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