

isc Silicon PNP Power Transistor

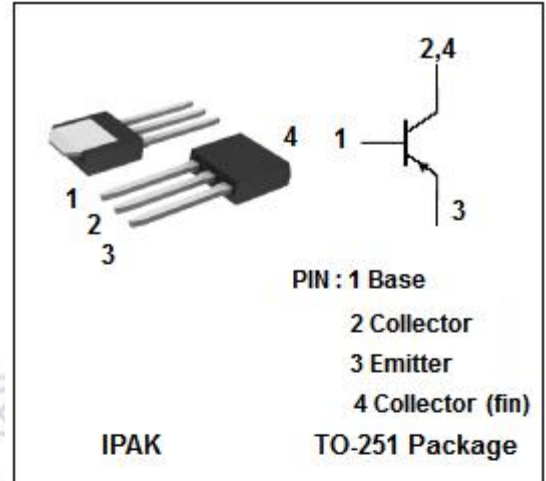
2SA1648

DESCRIPTION

- Available for high-current control in small dimension
- Low collector saturation voltage:
 $V_{CE(sat)} = -0.3V(Max) @ I_C = -3A$
- Fast switching speed
- High DC current gain and excellent linearity
- 100% tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- This transistor is ideal for use in Switching regulators, DC/DC converters, motor drivers, Solenoid drivers and other low-voltage power supply devices, as well as for high-current switching.

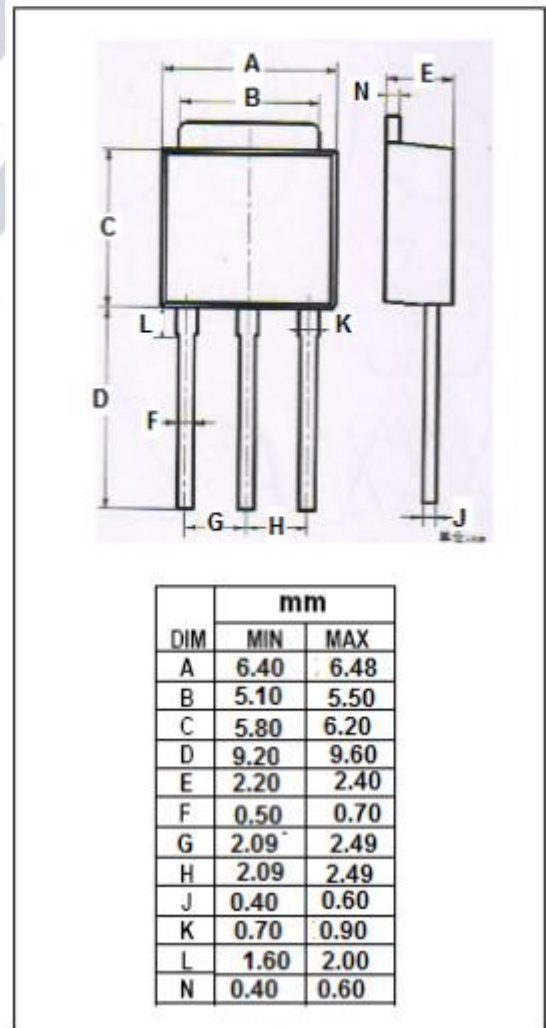


ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-100	V
V _{CEO}	Collector-Emitter Voltage	-60	V
V _{EBO}	Emitter-Base Voltage	-7	V
I _C	Collector Current-Continuous	-5	A
I _{CM}	Collector Current-Peak ^{NOTE1}	-10	A
P _C	Collector Power Dissipation @ T _C =25°C	18	W
	Collector Power Dissipation @ T _a =25°C ^{NOTE2}	1.0	
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C

NOTE1:PW≤10ms,Duty cycle ≤50%

NOTE2:Printing boarding mounted



isc Silicon PNP Power Transistor**2SA1648****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)-1} ^{NOTE}	Collector-Emitter Saturation Voltage	I _C = -3A; I _B = -150mA			-0.3	V
V _{CE(sat)-2} ^{NOTE}	Collector-Emitter Saturation Voltage	I _C = -4A; I _B = -200mA			-0.5	V
V _{BE(sat)-1} ^{NOTE}	Base-Emitter Saturation Voltage	I _C = -3A; I _B = -150mA			-1.2	V
V _{BE(sat)-2} ^{NOTE}	Base-Emitter Saturation Voltage	I _C = -4A; I _B = -200mA			-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V; I _E = 0			-10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-10	μ A
h _{FE-1} ^{NOTE}	DC Current Gain	I _C = -0.5A; V _{CE} = -2V	100			
h _{FE-2} ^{NOTE}	DC Current Gain	I _C = -1A; V _{CE} = -2V	100		400	
h _{FE-3} ^{NOTE}	DC Current Gain	I _C = -3A; V _{CE} = -2V	60			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V; f= 1.0MHz		80		pF
f _T	Current-Gain—Bandwidth Product	I _C = -500mA; V _{CE} = -10V		90		MHz

NOTE:Pulse test PW≤350us,duty cycle ≤2%/pulse

◆ **h_{FE-2} Classifications**

M	L	K
100-200	150-300	200-400

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