

isc Silicon NPN Power Transistors

MJ15024G

DESCRIPTION

- Complement to Type PNP MJ15025
- Excellent Safe Operating Area
- High DC current Gain
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power audio, disk head positioners and other linear applications

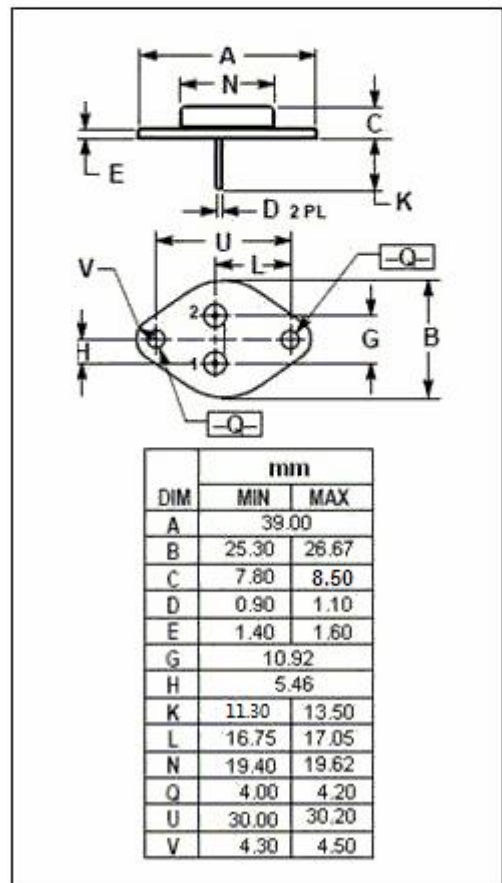
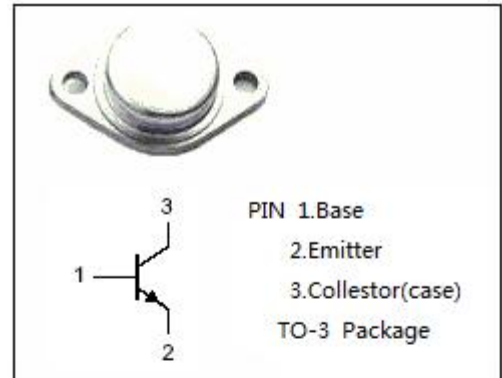
ABSOLUTE MAXIMUM RATINGS($T_c=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	16	A
I_{CM} (1)	Collector Current-Peak	30	A
I_B	Base Current-Continuous	5	A
P_D	Total Power Dissipation @ $T_c=25^{\circ}\text{C}$	250	W
T_j	Junction Temperature	-65~200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.70	$^{\circ}\text{C/W}$

(1) Pulse Test: Pulse Width = 5 ms, Duty Cycle < 10%.



isc Silicon NPN Power Transistors**MJ15024G****ELECTRICAL CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)} (1)	Collector-Emitter Sustaining Voltage	I _C = 100mA ; I _B = 0	250		V
V _{CE(sat)} -1	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 0.8A		1.4	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 16A; I _B = 3.2A		4.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 8A ; V _{CE} = 4V		2.2	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 200V; I _B = 0		0.5	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 250V; I _E = 0		0.25	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0		0.5	mA
h _{FE-1}	DC Current Gain	I _C = 8A ; V _{CE} = 4V	15	60	
h _{FE-2}	DC Current Gain	I _C = 16A ; V _{CE} = 4V	5		
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f _{test} = 1.0MHz	300		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 10V; f _{test} = 1.0MHz	4		MHz

(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle < 2%.

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