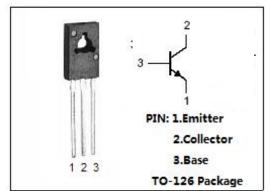


### isc Silicon NPN Power Transistor

# **MJE520**

#### **DESCRIPTION**

- High Collector Current-I<sub>C</sub>= 3.0A
- · High Collector-Emitter Breakdown Voltage-
  - : V<sub>(BR)CEO</sub>= 30V(Min)
- Good Linearity of hFE
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

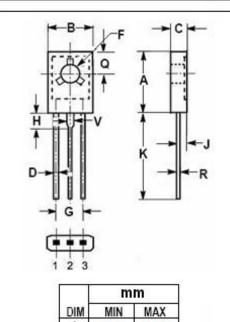


#### **APPLICATIONS**

· Designed for power amplifier applications

### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{\text{CBO}}$	Collector-Base Voltage	30	V
$V_{\text{CEO}}$	Collector-Emitter Voltage	30	V
V <sub>EBO</sub>	Emitter-Base Voltage	4	V
Ic	Collector Current-Continuous	3	А
I <sub>CP</sub>	Collector Current-Pulse	7	А
Pc	Collector Power Dissipation @ Tc=25°C	25	W
TJ	Junction Temperature	150	$^{\circ}$ C
Tstg	Storage Temperature Range	-65~150	$^{\circ}$ C



- 3	IIIIII		
DIM	MIN	MAX	
Α	10.70	10.95	
В	7.70	7.90	
C	2.60	2.80	
D	0.66	0.86	
F	3.10	3.30	
G	4.48	4.68	
Н	2.00	2.20	
J	1.35	1.55	
K	15.30	16.30	
Q	3.70	3.90	
R	0.40	0.60	
٧	1.17	1.37	



## isc Silicon NPN Power Transistor

**MJE520** 

#### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 100 μ A ; I <sub>E</sub> = 0	30			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 100mA	30			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Vltage	I <sub>E</sub> = 100 μ A ; I <sub>C</sub> = 0	4			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 500mA; I <sub>B</sub> = 50mA			0.5	٧
Ісво	Collector Cutoff Current	V <sub>CB</sub> = 50V; I <sub>E</sub> = 0			10	μА
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 4V; I <sub>C</sub> = 0			10	μ <b>A</b>
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1 A; V <sub>CE</sub> = 1 V	20			
f⊤	Current-Gain—Bandwidth Product	Ic= 50mA ; V <sub>CE</sub> = 10V	30			MHz
Сов	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V,f <sub>test</sub> = 1MHz		20		pF



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