

isc Silicon NPN Power Transistor

2SC2523

DESCRIPTION

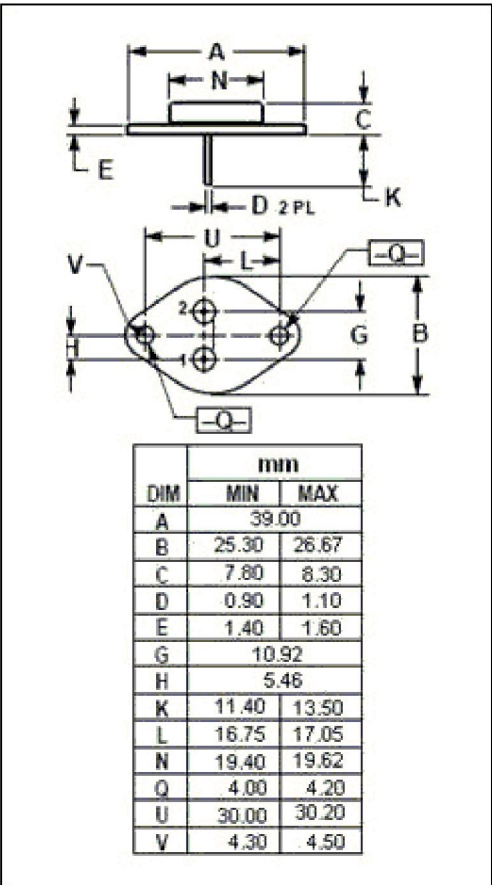
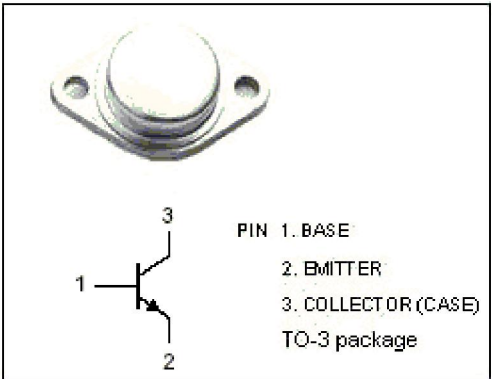
- High Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = 160V(\text{Min})$
- Fast Switching Speed
- Wide Area of Safe Operation
- Complement to Type 2SA1073

APPLICATIONS

- High frequency power amplifier
- Audio power amplifiers
- Switching regulators
- DC-DC converters

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	7	V
I_C	Collector Current-Continuous	12	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	120	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^{\circ}\text{C}$



isc Silicon NPN Power Transistor**2SC2523****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA; R _{BE} = ∞	160			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 50 μ A; I _E = 0	160			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50 μ A; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.8	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 5A; V _{CE} = 5V			1.7	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 160V; I _E = 0			50	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 160V; R _{BE} = ∞			1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			50	μ A
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 5V	60		200	
h _{FE-2}	DC Current Gain	I _C = 7A; V _{CE} = 5V	40			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1.0MHz		180		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V; f= 10MHz		80		MHz

Switching Times

t _r	Rise Time	I _C = 7.5A; I _{B1} = -I _{B2} = 0.75A; R _L = 4 Ω		0.3		μ s
t _{stg}	Storage Time			1.3		μ s
t _f	Fall Time			0.2		μ s