

isc Silicon NPN Power Transistor

2N5240

DESCRIPTION

- High Voltage-
: $V_{CEO(SUS)} = 300V(\text{Min})$
- Wide Area of Safe Operation

APPLICATIONS

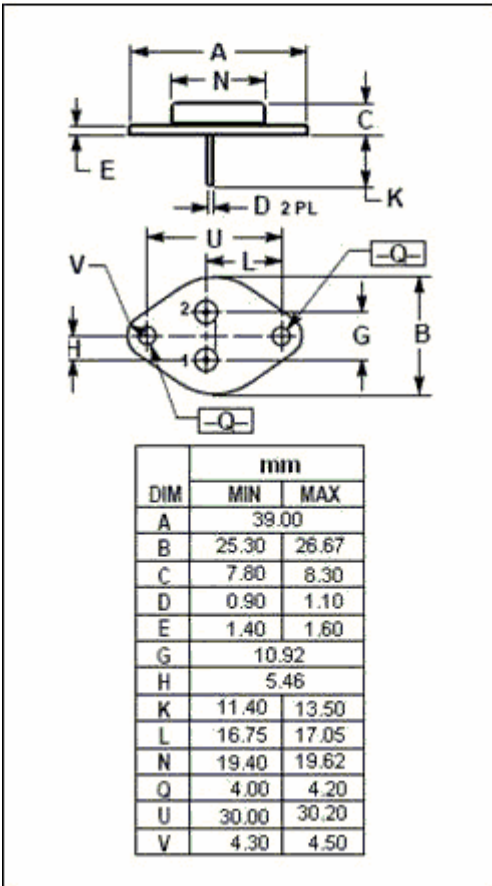
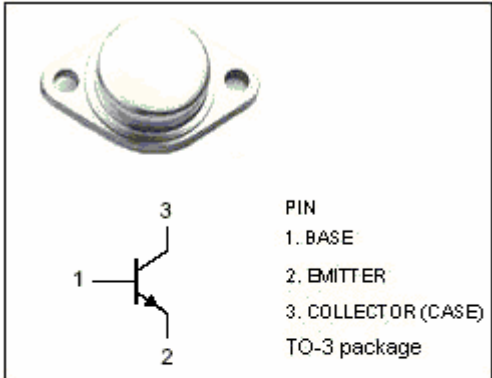
- Designed for use in series regulators, power amplifiers, inverters, deflection circuits, switching regulators, and high-voltage bridge amplifiers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	375	V
$V_{CER(SUS)}$	Collector-Emitter Voltage $R_{BE} \leq 50 \Omega$	350	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current	2	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	100	W
T_J	Junction Temperature	200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.75	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistor**2N5240****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 0.2A ; I _B = 0	300			V
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 0.2A ; R _{BE} ≤ 50 Ω	350			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.02A; I _C = 0	6			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.25A			2.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 4.5A; I _B = 1.125A			5.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 2A ; V _{CE} = 10V			3.0	V
I _{CEV}	Collector Cutoff Current	V _{CE} =375V; V _{BE} = -1.5V V _{CE} =300V; V _{BE} = -1.5V; T _C = 150°C			2 3	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 200V; I _B = 0			2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C =0			5	mA
h _{FE-1}	DC Current Gain	I _C = 0.4A; V _{CE} = 10V	20		80	
h _{FE-2}	DC Current Gain	I _C = 2A; V _{CE} = 10V	20		80	
h _{FE-3}	DC Current Gain	I _C = 4.5A; V _{CE} = 10V	5			
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A; V _{CE} = 10V	2			MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz			250	pF