

2SC1470

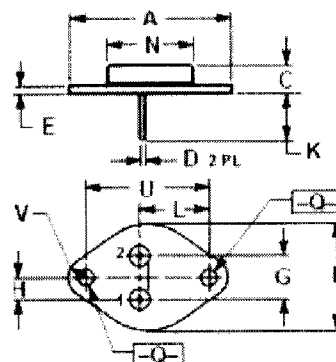
SILICON NPN POWER TRANSISTOR

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

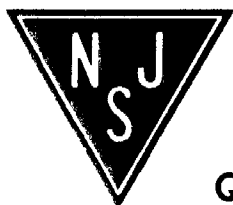
SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	850	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	20	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	10	A
I_{BM}	Base Current-Peak	20	A
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	250	W
T_J	Junction Temperature	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	0.7	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A		39.00
B	25.30	26.67
C	9.30	11.10
D	0.80	1.10
E	2.90	3.10
G		10.92
H		5.46
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50



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ELECTRICAL CHARACTERISTICS

$T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$; $I_B=0$	450			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}$; $I_B=1\text{A}$			2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=15\text{A}$; $I_B=1.5\text{A}$ $I_C=15\text{A}$; $I_B=1.5\text{A}$, $T_C=100^{\circ}\text{C}$			3.0 3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=15\text{A}$; $I_B=1.5\text{A}$ $I_C=15\text{A}$; $I_B=1.5\text{A}$, $T_C=100^{\circ}\text{C}$			1.5 1.5	V
I_{CEV}	Collector Cutoff Current	$V_{CEV}=850\text{V}$; $V_{BE(off)}=1.5\text{V}$ $V_{CEV}=850\text{V}$; $V_{BE(off)}=1.5\text{V}$; $T_C=100^{\circ}\text{C}$			0.25 1.5	mA
I_{CER}	Collector Cutoff Current	$V_{CE}=850\text{V}$; $R_{BE}=50\Omega$, $T_C=100^{\circ}\text{C}$			2.5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}$; $I_C=0$			1.0	mA
h_{FE}	DC Current Gain	$I_C=20\text{A}$; $V_{CE}=5\text{V}$	7			
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{test}=1.0\text{kHz}$			500	pF

Switching times;Resistive Load

t_d	Delay Time	$I_C=15\text{A}$, $V_{CC}=250\text{V}$, $R_{B2}=1.6\Omega$ $I_{B1}=1.5\text{A}$; $I_{B2}=-3\text{A}$, $PW=30\mu\text{s}$ Duty Cycle $\leq 2.0\%$		20	50	ns
t_r	Rise Time			200	500	ns
t_s	Storage Time			900	2200	ns
t_f	Fall Time			100	250	ns