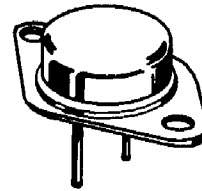


BUV20



NPN MULTI - EPITAXIAL POWER TRANSISTOR

FEATURES

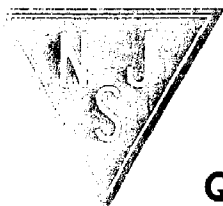
- HIGH CURRENT
- FAST SWITCHING
- HIGH RELIABILITY

APPLICATIONS

- Industrial Equipment

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector - Base Voltage ($I_E = 0$)	160V
V_{CER}	Collector - Emitter Voltage ($R_{BE} = 100\Omega$)	150V
V_{CEX}	Collector - Emitter Voltage ($V_{BE} = -1.5V$)	160V
V_{CEO}	Collector - Emitter Voltage ($I_B = 0$)	125V
V_{EBO}	Emitter - Base Voltage ($I_C = 0$)	7V
I_C	Collector Current	50A
I_{CM}	Peak Collector Current ($t_p = 10$ ms)	60A
I_B	Base Current	10A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	250W
T_{stg}	Storage Temperature	-65 to 200°C
T_j	Junction Temperature	200°C



ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

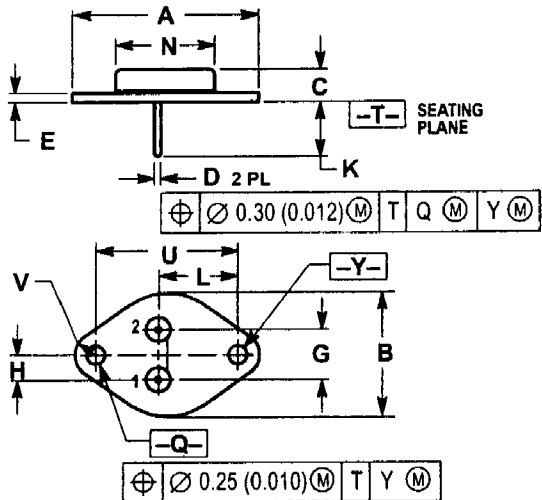
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _{CEO(sus)*}	Collector - Emitter Sustaining Voltage I _C = 250mA I _B = 0 L = 25mH	125			V
V _{(BR)EBO}	Emitter - Base Voltage I _E = 50mA	7			
V _{CE(sat)*}	Collector Emitter Saturation Voltage I _C = 25A		0.3	0.6	
	I _C = 50A		0.7	1.2	
V _{BE(sat)*}	Base Emitter Saturation Voltage I _C = 50A I _B = 5A		1.4	2	
I _{CEO}	Collector Cut-off Current V _{CE} = 100V I _B = 0			3	mA
I _{CEX}	Collector Cut-off Current V _{CE} = V _{CEX} V _{BE} = -1.5V T _C = 125°C			3	
				12	
I _{EBO}	Emitter Cut-off Current I _C = 0 V _{EB} = 5V			1	
h _{FE*}	DC Current Gain V _{CE} = 2V I _C = 25A	20		60	—
	V _{CE} = 4V I _C = 50A	10			
f _T	Transition Frequency I _C = 2A V _{CE} = 15V f = 100MHz	8			MHz
t _{on}	Turn-On Time I _C = 50A I _B = 5A			1.5	μs
t _s	Storage Time I _C = 50A I _{B1} = -I _{B2} = 5A			1.2	
t _r	Fall Time I _C = 50A I _{B1} = -I _{B2} = 5A			0.3	

NOTES

* Pulse Test: t_p = 300μs, δ ≤ 2%

MECHANICAL DATA

Dimensions in mm(inches)



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.530 REF		38.86 REF	
B	0.990	1.050	25.15	26.67
C	0.250	0.335	6.35	8.51
D	0.057	0.063	1.45	1.60
E	0.060	0.070	1.53	1.77
G	0.430 BSC		10.92 BSC	
H	0.215 BSC		5.46 BSC	
K	0.440	0.480	11.18	12.19
L	0.665 BSC		16.89 BSC	
N	0.760	0.830	19.31	21.08
Q	0.151	0.165	3.84	4.19
U	1.187 BSC		30.15 BSC	
V	0.131	0.188	3.33	4.77

TO-3

PIN 1 — Base
 PIN 2 — Emitter
 Case is Collector.