Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MJD32C

Silicon PNP epitaxial planer Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material:Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Electrically similar to popular TIP32 Series
- Designed for general purpose amplifier and low speed switching applications.
- Maximum Thermal Resistance: 100°C/W Junction to Ambient

Maximum Ratings @ 25°C Unless Otherwise Specified

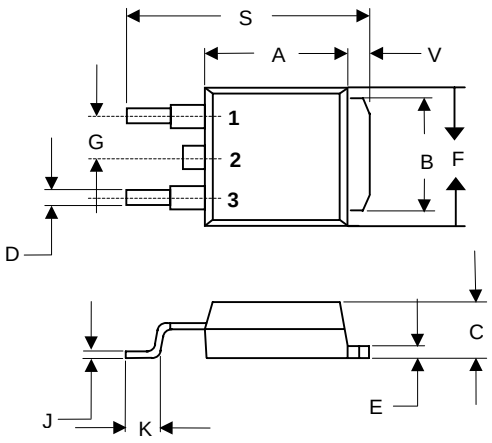
Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{CBO}	Collector-Base Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-3	A
P_C	Collector Dissipation	1.25	W
T_J	Operating Junction Temperature	150	℃
T_{STG}	Storage Temperature	-65 to +150	℃

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=-30mAdc, I_B=0)	-100	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=-1mAdc, I_E=0)	-100	---	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=-1mAdc, I_C=0)	-5	---	---	Vdc
I_{CEO}	Collector Cutoff Current (V_{CE}=-60Vdc, I_B=0)	---	---	-50	uAdc
I_{CES}	Collector Cutoff Current (V_{CE}=-100Vdc, V_{EB}=0)	---	---	-20	uAdc
I_{EBO}	Emitter Cutoff Current (V_{EB}=-5Vdc, I_C=0)	---	---	-1	mAdc
h_{FE}	DC Current Gain (I_C=-1Adc, V_{CE}=-4Vdc) (I_C=-3Adc, V_{CE}=-4Vdc)	25 10	--- ---	--- 50	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=-3Adc, I_B=-0.375Adc) (note 1)	---	---	-1.2	Vdc
$V_{BE(on)}$	Base-Emitter Voltage (I_C=-3Adc, V_{CE}=-4Vdc) (note 1)	---	---	-1.8	Vdc
f_T	Transition frequency (V_{CE}=-10Vdc,I_C=-0.5Adc,f_T=1KHz)	3	---	---	MHz

Note: 1. Pulse Test: PW≤300μs, Duty Cycle≤2%

DPACK



PIN 1. BASE
PIN 2. COLLECTOR
PIN 3. EMITTER

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	0.235	0.245	5.97	6.22	
B	0.205	0.215	5.21	5.46	
C	0.086	0.094	2.19	2.38	
D	0.025	0.035	0.64	0.89	
E	0.035	0.045	0.99	1.14	
F	0.250	0.265	6.35	6.73	
G	0.090		2.28		
J	0.018	0.023	0.48	0.58	
K	0.020	---	0.51	---	
S	0.370	0.410	9.40	10.42	
V	0.035	0.050	0.88	1.27	

TYPICAL CHARACTERISTICS

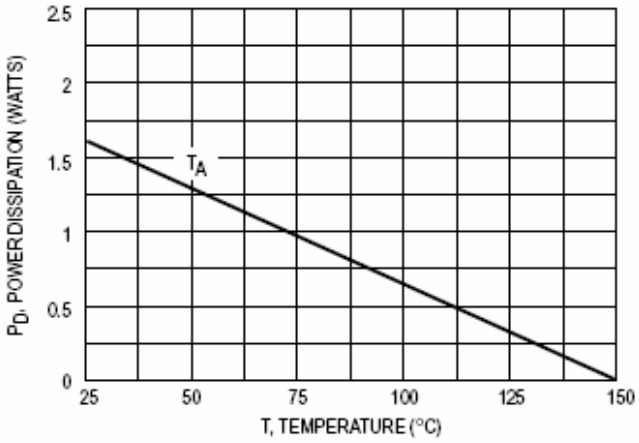


Figure 1. Power Derating

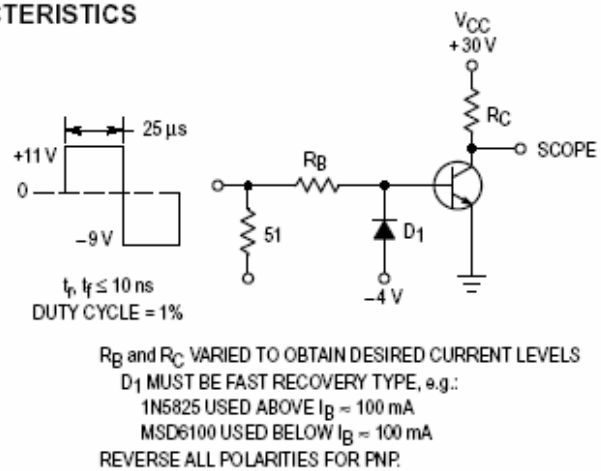


Figure 2. Switching Time Test Circuit

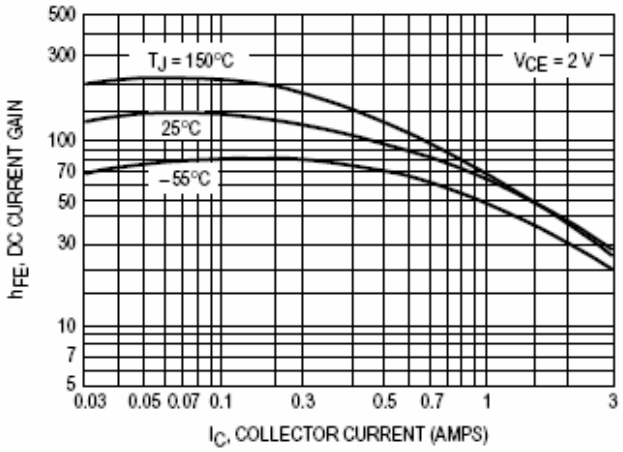


Figure 3. DC Current Gain

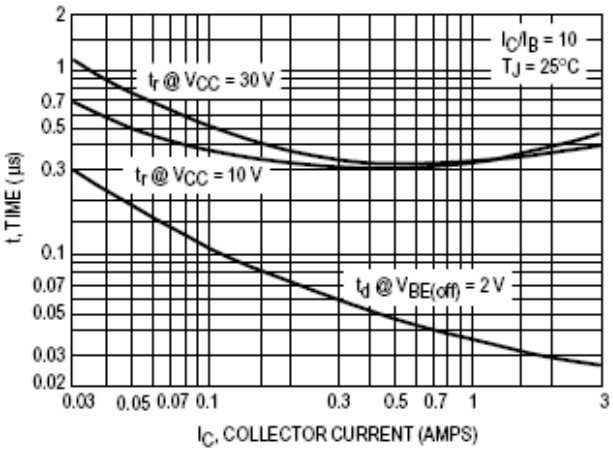


Figure 4. Turn–On Time

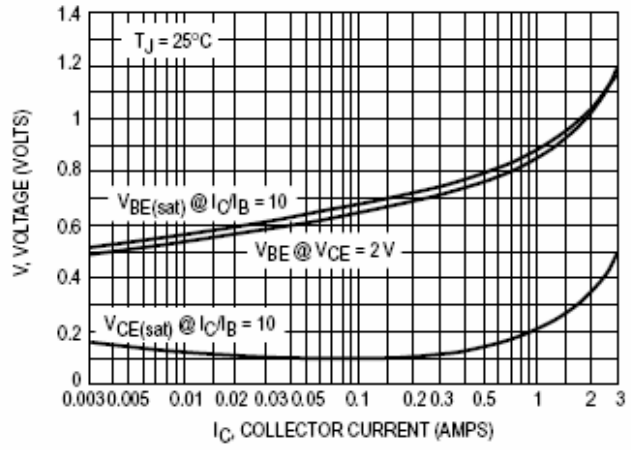


Figure 5. “On” Voltages

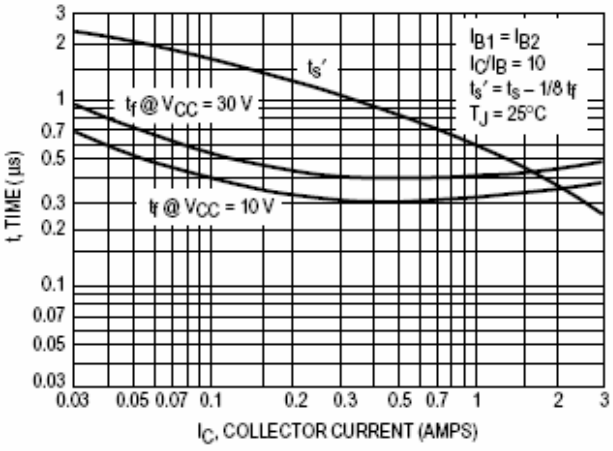


Figure 6. Turn–Off Time

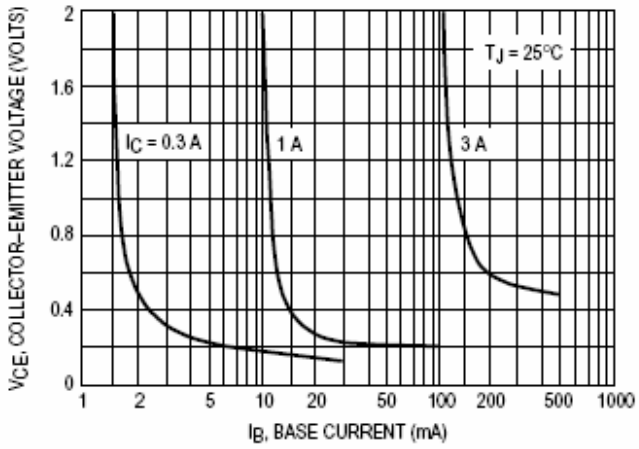


Figure 7. Collector Saturation Region

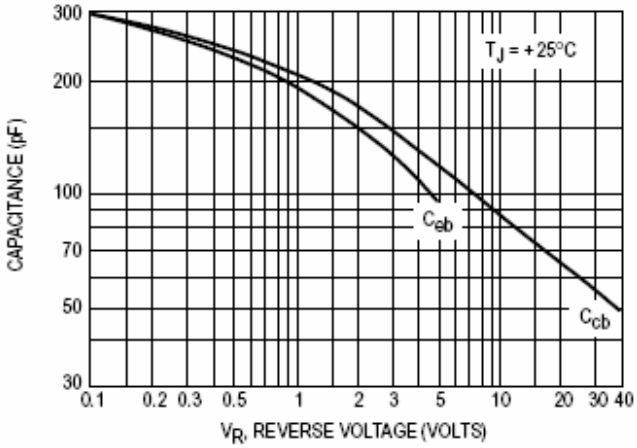


Figure 8. Capacitance

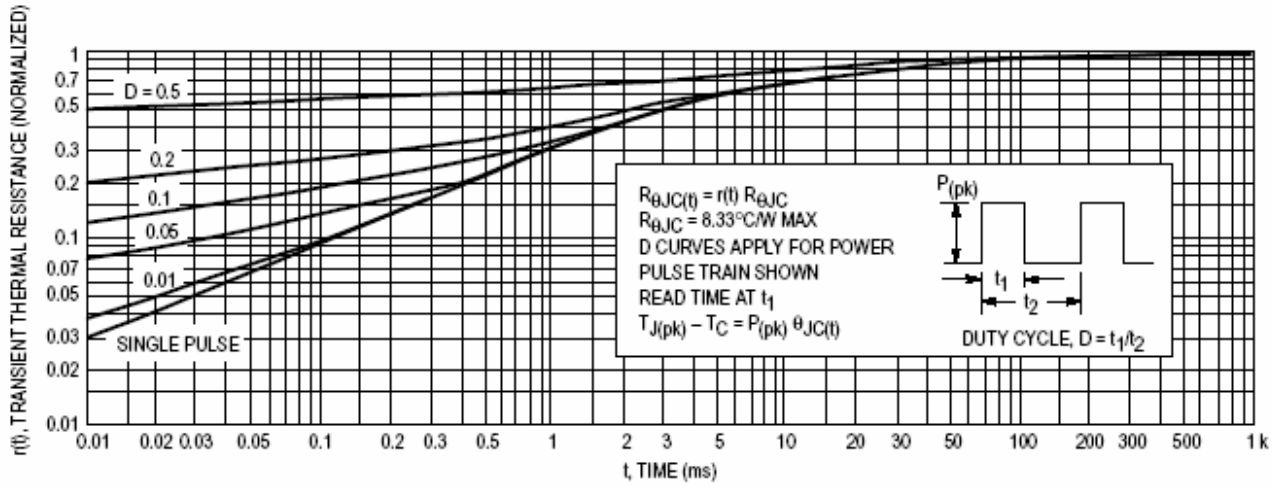


Figure 9. Thermal Response

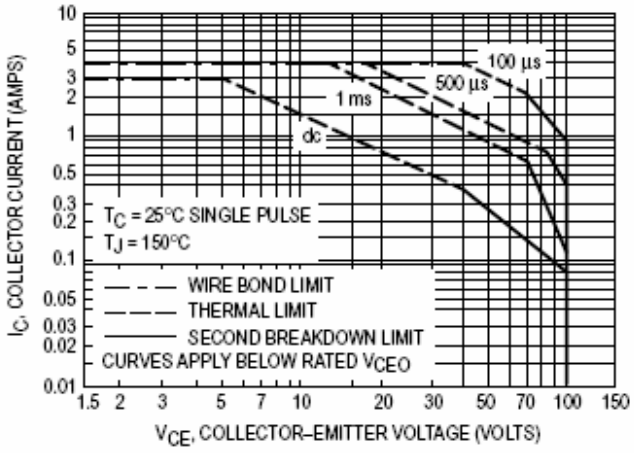


Figure 10. Active Region Safe Operating Area

There are two limitations on the power handling ability of a transistor: average junction temperature and second breakdown. Safe operating area curves indicate $I_C - V_{CE}$ limits of the transistor that must be observed for reliable operation; i.e., the transistor must not be subjected to greater dissipation than the curves indicate.

The data of Figure 10 is based on $T_{J(pk)}$ = 150°C; T_C is variable depending on conditions. Second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(pk)} \leq 150°C$. $T_{J(pk)}$ may be calculated from the data in Figure 9. At high case temperatures, thermal limitations will reduce the power that can be handled to values less than the limitations imposed by second breakdown.

Micro Commercial Components

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;2.5Kpcs/Reel

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp . reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . *Micro Commercial Components Corp* . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp* . and all the companies whose products are represented on our website, harmless against all damages.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the expresse written approval of Micro Commercial Components Corporation.