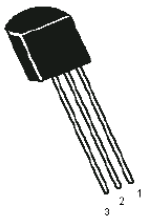
High Voltage Transistor

multicomp PRO

Features:

- Devices with breakdown voltages of 160V minimum, for applications requiring relatively low collector current, such as lamp drivers and neon tubes
- NPN silicon planar epitaxial transistor
- Complementary High Voltage Transistor



Pin Configuration:

1. Collector
2. Base
3. Emitter

Absolute Maximum Ratings

Parameters	Symbol	Value	Units
Collector Emitter Voltage	V_{CEO}	300	V
Collector Base Voltage	V_{CBO}		
Emitter Base Voltage	V_{EBO}	6	
Collector Current Continuous	I_C	500	mA
Power Dissipation at T_a = 25°C Derate Above 25°C	P_D	625 5	mW mW/°C
Total Device Dissipation at T_C = 25°C Derate Above 25°C		1.5 12	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C

Thermal Resistance

Junction to Ambient	$R_{th\ (j\text{-}a)}$	200	°C/W
Junction to Case	$R_{th\ (j\text{-}c)}$	83.3	

Electrical Characteristics (T_a = 25°C unless otherwise specified)

Description	Symbol	Test Condition	Minimum	Maximum	Units
Collector Emitter Voltage	V_{CEO}	I_C = 1mA, I_B = 0	300	-	V
Collector Base Voltage	V_{CBO}	I_C = 100µA, I_E = 0		-	
Emitter Base Voltage	V_{EBO}	I_E = 100µA, I_C = 0	6	-	
Collector-Cut off Current	I_{CBO}	V_{CB} = 200V, I_E = 0	-	0.1	µA
Emitter-Cut off Current	I_{EBO}	V_{BE} = 6V, I_C = 0	-		

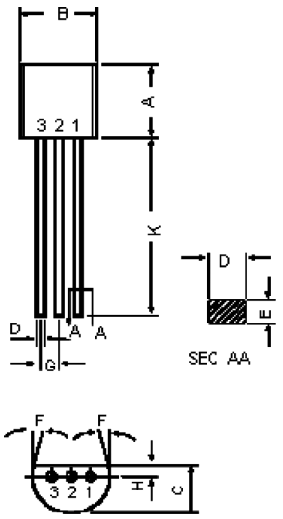
Electrical Characteristics (T_a = 25°C unless otherwise specified)

Description	Symbol	Test Condition	Minimum	Maximum	Units
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$*	I_C = 20mA, I_B = 2mA	-	0.5	V
Base Emitter Saturation Voltage	$V_{BE\ (sat)}$*		-	0.9	
DC Current Gain	h_{FE}*	V_{CE} = 10V, I_C = 1mA V_{CE} = 10V, I_C = 10mA V_{CE} = 10V, I_C = 30mA	25 40 40	-	-

Dynamic Characteristics

Current Gain-Bandwidth Product	f_T	I_C = 10mA, V_{CE} = 20V, f = 100MHz	50	-	MHz
Collector Base Capacitance	C_{cb}	I_E = 0, V_{CB} = 20V, f = 1MHz	-	3	pF

*Pulse Condition : Pulse Width ≤300μs, Duty Cycle ≤2%.



Dimensions	Minimum	Maximum
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.41	0.55
E	0.35	0.5
F	5°	
G	1.14	1.4
H		1.53
K	12.7	-

Dimensions : Millimetres

Pin Configuration:

1. Collector
2. Base
3. Emitter

Part Number Table

Description	Part Number
Transistor, NPN, TO-92	MPSA42