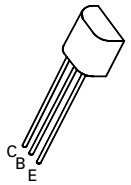
NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

2N6716
2N6717
2N6718

ISSUE 1 – MARCH 94

FEATURES

* 100 Volt V_{CEO}
* Gain of 20 at I_C = 0.5 Amp
* P_{tot}=1 Watt



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	2N6716	2N6717	2N6718	UNIT
Collector-Base Voltage	V_{CBO}	60	80	100	V
Collector-Emitter Voltage	V_{CEO}	60	80	100	V
Emitter-Base Voltage	V_{EBO}	5			V
Peak Pulse Current	I_{CM}	2			A
Continuous Collector Current	I_C	1			A
Power Dissipation at T_{amb}= 25°C	P_{tot}	1			W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +200			°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	2N6716		2N6717		2N6718		UNIT	CONDITIONS.
		MIN.	MAX	MIN.	MAX	MIN.	MAX		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60		80		100		V	I_C=0.1mA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60		80		100		V	I_C=1mA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		5		5		V	I_E=1mA, I_C=0
Collector Cut-Off Current	I_{CBO}		1		1		1	µA µA µA	V_{CB}=60V, I_E=0 V_{CB}=80V, I_E=0 V_{CB}=100V, I_E=0
Emitter Cut-Off Current	I_{EBO}		1		1		1	µA	V_{EB}=5V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5 0.35		0.5 0.35		0.5 0.35	V	I_C=250mA, I_B=10mA* I_C=250mA,I_B=25mA*
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		1.2		1.2		1.2	V	IC=250mA, V_{CE}=1V*
Static Forward Current Transfer Ratio	h_{FE}	80 50 20	 250	80 50 20	 250	80 50 20	 250		I_C=50mA, V_{CE}=1V* I_C=250mA, V_{CE}=1V* I_C=500mA, V_{CE}=1V*
Transition Frequency	f_T	50	500	50	500	50	500	MHz	I_C=50mA, V_{CE}=10V
Collector Base Capacitance	C_{CB}		30		30		30	pF	V_{CE}=10V, f=1MHz

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤2%