

**MILITARY APPROVED  
LOW LEVEL SWITCHING  
SILICON EPITAXIAL JUNCTION  
PNP TRANSISTORS**

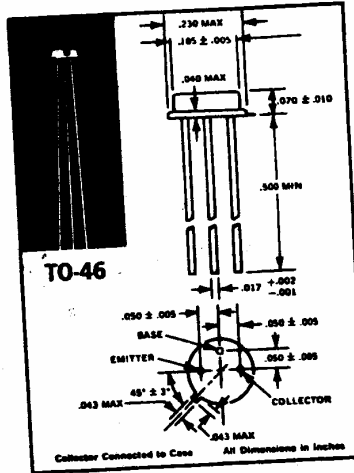
**2N2944A  
2N2945A  
2N2946A  
and JAN,  
JTX, JTXV**

**GEOMETRY 292**

- ULTRA LOW LEAKAGE
- LOW  $C_{ob}$
- LOW  $r_{ec}$  (sat)
- HIGH  $BV_{EBO}$

**ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	2N2944A	2N2945A	2N2946A	UNITS
Collector To Emitter Voltage	$BV_{CE0}$	10	20	35	Volts
Collector To Base Voltage	$BV_{CBO}$	15	25	40	Volts
Emitter To Base Voltage	$BV_{EBO}$	15	25	40	Volts
Collector Current	$I_C$	100	100	100	mA
Total Power Dissipation (free air)	$P_D$	400	400	400	mW
Storage Temp. (max)	$T_{stg}$	200	200	200	$^{\circ}C$
Operation Temp. (max)	$T_{op}$	200	200	200	$^{\circ}C$
Lead Temp ( @ 1/16 - 1/32 from case)	$T_L$	240* for 10 sec.			
Derating Factor	$D_F$	2.3	2.3	2.3	mW/ $^{\circ}C$



**ELECTRICAL CHARACTERISTICS:  $T_A = 25^{\circ}C$  (UNLESS OTHERWISE STATED)**

PARAMETER	SYMBOL	CONDITIONS	2N2944A			2N2945A			2N2946A			UNITS
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Collector Leakage	$I_{CBO}$	At Max Rated Voltage	—	0.01	0.1	—	0.02	0.2	—	0.04	0.5	nA
Emitter Leakage	$I_{EBO}$	At Max Rated Voltage	—	0.01	0.1	—	0.02	0.2	—	0.04	0.5	nA
Collector Leakage at $100^{\circ}C$	$I_{CBO}$	At Max Rated Voltage	—	1.0	10	—	2.0	20	—	4.0	25	nA
Emitter Leakage at $100^{\circ}C$	$I_{EBO}$	At Max Rated Voltage	—	1.0	10	—	2.0	15	—	4.0	20	nA
Offset Voltage	$V_O$	$I_B = 200\mu A$ $I_C = 0$	—	0.2	0.3	—	0.35	0.5	—	0.5	0.8	mV
Offset Voltage	$V_O$	$I_B = 1mA$ $I_C = 0$	—	0.4	0.6	—	0.7	1.0	—	1.0	2.0	mV
Offset Voltage	$V_O$	$I_B = 2mA$ $I_C = 0$	—	0.7	1.0	—	0.8	1.6	—	1.3	2.5	mV
D.C. Common Emitter Forward Current Transfer Ratio	$h_{FE}$	$V_{CE} = -0.5V$ $I_C = 1mA$	100	250	—	70	150	—	50	100	—	
D.C. Common Collector Forward Current Transfer Ratio	$h_{FC}$	$V_{EB} = -0.5V$ $I_B = 200\mu A$	50	—	—	30	—	—	20	—	—	
High Frequency Current Gain	$h_{FE}$	$f = 1MHz$ $V_{CE} = -6V$ $I_C = 1mA$	15	—	—	10	—	—	5	—	—	
Inverted Dynamic Saturation Resistance	$r_{EC(sat)}$	$I_B = 0.1mA$ $I_C = 1mA$ $f = 1kHz$	—	—	4	—	—	6	—	—	8	Ohms
Collector To Base Capacitance	$C_{ob}$	$V_{CB} = -6V$ $I_C = 1mA$	—	—	10	—	—	10	—	—	10	ptf
Emitter To Base Capacitance	$C_{eb}$	$V_{EB} = -6V$ $I_C = 0$	—	—	6	—	—	6	—	—	6	ptf

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