

High-reliability discrete products and engineering services since 1977

2N2417,A,B-2N2422,A,B,

SILICON UNIJUNCTION TRANSISTOR

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Power dissipation ⁽¹⁾	P _D	350	mW
RMS emitter current	lε	70	mA
Peak pulse emitter current (2)	i _e	2	Amps
Emitter reverse voltage	V _{B2E}	60	Volts
Interbase voltage	V _{B2B1}	65	Volts
Operating junction and storage temperature range	T _J	-65 to 175	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter			Symbol	Min	Тур	Max	Unit
Intrinsic standoff ratio		2N2417, 2N2417A, 2N2417B		0.51	-	0.62	
$(V_{B2B1} = 10V)^{(1)}$		2N2418, 2N2418A, 2N2418B		0.51	-	0.62	
		2N2419, 2N2419A, 2N2419B		0.56	-	0.68	
		2N2420, 2N2420A, 2N2420B	ŋ	0.56	-	0.68	-
		2N2421, 2N2421A, 2N2422B		0.62	-	0.75	
		2N2422, 2N2422A, 2N2422B		0.62	-	0.75	
Interbase resistance		2N2417, 2N2417A, 2N2417B		4.7	-	6.8	
$(V_{B2B1} = 3V, I_E = 0)$		2N2418, 2N2418A, 2N2418B		6.2	-	9.1	
		2N2419, 2N2419A, 2N2419B		4.7	-	6.8	
		2N2420, 2N2420A, 2N2420B	r _{BB}	6.2	-	9.1	kohms
		2N2421, 2N2421A, 2N2422B		4.7	-	6.8	
		2N2422, 2N2422A, 2N2422B		6.2	-	9.1	
Emitter saturation voltage (V _{B2B1} = 10V, I _E = 50mA) ⁽²⁾		V _{EB1(sat)}	-	3.5	-	Volts	
Modulated interbase curren	$t (V_{B2B1} = 10V, I_{E})$	= 50mA)	I _{B2(mod)}	-	15	-	mA
Emitter reverse current		2N2417, 2N2418, 2N2419, 2N2420,					
$(I_{B1} = 0)$	$V_{B2E} = 60V$	2N2421, 2N2422		-	-	2	
		2N2417A, 2N2418A, 2N2419A,					
	$V_{B2E} = 60V$	2N2420A, 2N2421A, 2N2422A	I _{EB2O}	-	-	2	μΑ
		2N2417B, 2N2418B, 2N2419B,					
	$V_{B2E} = 30V$	2N2420B, 2N2421B, 2N2422B		-	-	0.2	
Peak point emitter current		2N2417, 2N2418, 2N2419, 2N2420,					
$(V_{B2B1} = 25V)$		2N2421, 2N2422		-	-	12	
		2N2417A, 2N2418A, 2N2419A,					
		2N2420A, 2N2421A, 2N2422A	I _{EB2O}	-	-	12	μΑ
		2N2417B, 2N2418B, 2N2419B,					
		2N2420B, 2N2421B, 2N2422B		-	-	6	1
Valley point current (V _{B2B1} = 20V, R _{B2} = 100ohms) ⁽²⁾		I _V	8	-	-	mA	
Base-one peak pulse voltage(3)		2N2417, 2N2418, 2N2419, 2N2420,					1
		2N2421, 2N2422		-	-	-	
		2N2417A, 2N2418A, 2N2419A,	.,				.,
		2N2420A, 2N2421A, 2N2422A	V _{OB1}	3	-	-	V
		2N2417B, 2N2418B, 2N2419B,					
		2N2420B, 2N2421B, 2N2422B	ĺ	3	-	_	

Note 1: Intrinsic standoff voltage: $\eta = V_P - V_F / V_{8281}$, where $V_P =$ peak point emitter voltage, $V_{B281} =$ interbase voltage, $V_F =$ emitter to base one junction diode drop

Note 2: PW ≈ 300μs, duty cycle ≤ 2% to avoid internal heating due to interbase modulation which may result in erroneous readings

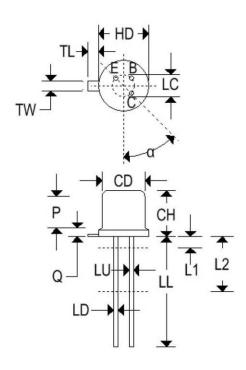
Note 3: Base one peak pulse voltage is used to ensure minimum pulse amplitude for applications in SCR firing circuits and other types of pulse circuits.



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MECHANICAL CHARACTERISTICS

Case:	TO-18
Marking:	Alpha-numeric
Pin Out:	See below



2N2417,A,B-2N2422,A,B,

SILICON UNIJUNCTION TRANSISTOR

		TO-18 (B.	JT)		
Dim	Inches		Millimeters		
	Min	Max	Min	Max	
CD	0.178	0.195	4.520	4.950	
CH	0.170	0.210	4.320	5.330	
HD	0.209	0.230	5.310	5.840	
LC	0.10	0.100 TP		2.540 TP	
LD	0.016	0.021	0.410	0.530	
LL	0.500	0.750	12.700	19.050	
LU	0.016	0.019	0.410	0.480	
L1	-	0.050	-	1.270	
L2	0.250	-	6.350	-	
P	0.100	-	2.540	(<u>*</u>	
Q	-	0.040	-	1.020	
TL	0.028	0.048	0.710	1.220	
TW	0.036	0.046	0.910	1.170	
r		0.010		0.025	
α	45	°ТР	45°TP		