MECHANICAL and PACKAGING

- CASE: Hermetically sealed, steel base, nickel cap
- TERMINALS: Steel Leads, nickel plated, then solder dipped or RoHS compliant matte-tin available on commercial grade only
- MARKING: Part number, date code, manufacturer's ID and serial number
- POLARITY: PNP
- WEIGHT: Approximately 1.064 grams
- See Package Dimensions on last page.

PART NOMENCLATURE

SYMBOLS & DEFINITIONS

Symbol	Definition
I_B	Base current: The value of the dc current into the base terminal.
I_C	Collector current: The value of the dc current into the collector terminal.
I_E	Emitter current: The value of the dc current into the emitter terminal.
T_C	Case temperature: The temperature measured at a specified location on the case of a device.
V_{CB}	Collector-base voltage: The dc voltage between the collector and the base.
V_{CBO}	Collector-base voltage, base open: The voltage between the collector and base terminals when the emitter terminal is open-circuited.
V_{CC}	Collector-supply voltage: The supply voltage applied to a circuit connected to the collector.
V_{CE}	Collector-emitter voltage: The dc voltage between the collector and the emitter.
V_{CEO}	Collector-emitter voltage, base open: The voltage between the collector and the emitter terminals when the base terminal is open-circuited.
V_{EB}	Emitter-base voltage: The dc voltage between the emitter and the base
V_{EBO}	Emitter-base voltage, collector open: The voltage between the emitter and base terminals with the collector terminal open-circuited.

ELECTRICAL CHARACTERISTICS @ T_A = +25 °C, unless otherwise noted

Characteristics		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage I_C = -100 mA	2N4234 2N4235 2N4236	$V_{(BR)CEO}$	-40 -60 -80		V
Collector-Emitter Cutoff Current V_{CB} = -30 V V_{CB} = -40 V V_{CB} = -60 V	2N4234 2N4235 2N4236	I_{CEO}		-1.0 -1.0 -1.0	mA
Collector-Emitter Cutoff Current V_{CB} = -40 V, V_{BE} = -1.5 V V_{CB} = -60 V, V_{BE} = -1.5 V V_{CB} = -80 V, V_{BE} = -1.5 V	2N4234 2N4235 2N4236	I_{CEX}		-100 -100 -100	nA
Collector-Base Cutoff Current V_{CB} = -40 V V_{CB} = -60 V V_{CB} = -80 V	2N4234 2N4235 2N4236	I_{CBO}		-100 -100 -100	nA
Emitter-Base Cutoff Current V_{BE} = -7.0 V		I_{EBO}		-0.5	mA
ON CHARACTERISTICS (3)					
Forward-Current Transfer Ratio I_C = -100 mA, V_{CE} = -1.0 V I_C = -250 mA, V_{CE} = -1.0 V I_C = -500 mA, V_{CE} = -1.0 V		h_{FE}	40 30 20	150	
Collector-Emitter Saturation Voltage I_C = -1.0 A, I_B = -100 mA I_C = -500 mA, I_B = -50 mA		$V_{CE(sat)}$		-0.6 -0.4	V
Base-Emitter Saturation Voltage I_C = -500 mA, I_B = -50 mA I_C = -1.0 A, I_B = -100 mA		$V_{BE(sat)}$		-1.1 -1.5	V
DYNAMIC CHARACTERISTICS					
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = -100 mA, V_{CE} = -10 V, f = 1 MHz		$\|h_{FE}\|$	3.0		
Output Capacitance V_{CB} = -10 V, I_E = 0, f = 100 MHz		C_{obo}		100	pF

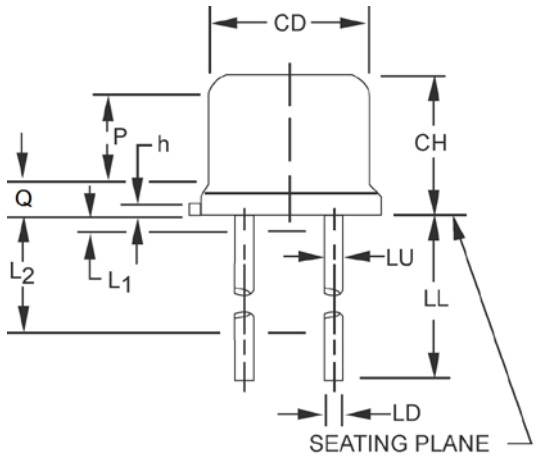
ELECTRICAL CHARACTERISTICS @ T_A = +25 °C, unless otherwise noted (continued)

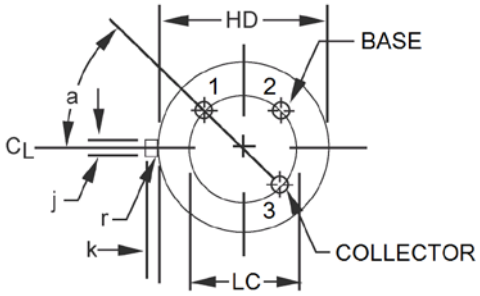
SAFE OPERATING AREA

DC Tests		
T_C = +25 °C, 1 cycle, t ≥ 0.5 s		
Test 1		
V_{CE} = -6.0 V, I_C = -1.0 A		
Test 2		
V_{CE} = -12 V, I_C = -500 mA		
Test 3		
V_{CE} = -30 V, I_C = -166 mA		(2N4234)
V_{CE} = -50 V, I_C = -100 mA		(2N4235)
V_{CE} = -70 V, I_C = -71 mA		(2N4236)

(3) Pulse Test: Pulse Width = 300 μs, duty cycle ≤ 2.0%

PACKAGE DIMENSIONS





Ltr	Dimensions				Notes
	Inch		Millimeters		
	Min	Max	Min	Max	
CD	0.305	0.335	7.75	8.51	
CH	0.240	0.260	6.10	6.60	
HD	0.335	0.370	8.51	9.40	
h	0.009	0.041	0.23	1.04	
j	0.028	0.034	0.71	0.86	3
k	0.029	0.045	0.74	1.14	3, 4
LD	0.016	0.021	0.41	0.53	8, 9
LL	0.500	0.750	12.7	19.05	
LC	0.200 TP		5.08 TP		7
LU	0.016	0.019	0.41	0.48	8, 9
L1	-	0.050	-	1.27	8, 9
L2	0.250	-	6.35	-	8, 9
P	0.100	-	2.54	-	7
Q	-	0.050	-	1.27	5
r	-	0.010	-	0.25	10
α	45° TP		45° TP		7

NOTES:

1. Dimensions are in inches.
2. Millimeters are given for information only.
3. Beyond r (radius) maximum, TL shall be held for a minimum length of 0.011 inch (0.28 mm).
4. Dimension TL measured from maximum HD.
5. Body contour optional within zone defined by HD, CD, and Q.
6. CD shall not vary more than .010 inch (0.25 mm) in zone P. This zone is controlled for automatic handling.
7. Leads at gauge plane 0.054 +0.001 -0.000 inch (1.37 +0.03 -0.00 mm) below seating plane shall be within 0.007 inch (0.18 mm) radius of true position (TP) at maximum material condition (MMC) relative to tab at MMC.
8. Dimension LU applies between L1 and L2. Dimension LD applies between L2 and LL minimum. Diameter is uncontrolled in L1 and beyond LL minimum.
9. All three leads.
10. The collector shall be internally connected to the case.
11. Dimension r (radius) applies to both inside corners of tab.
12. In accordance with ASME Y14.5M, diameters are equivalent to Φx symbology.
13. Lead 1 = emitter, lead 2 = base, lead 3 = collector.