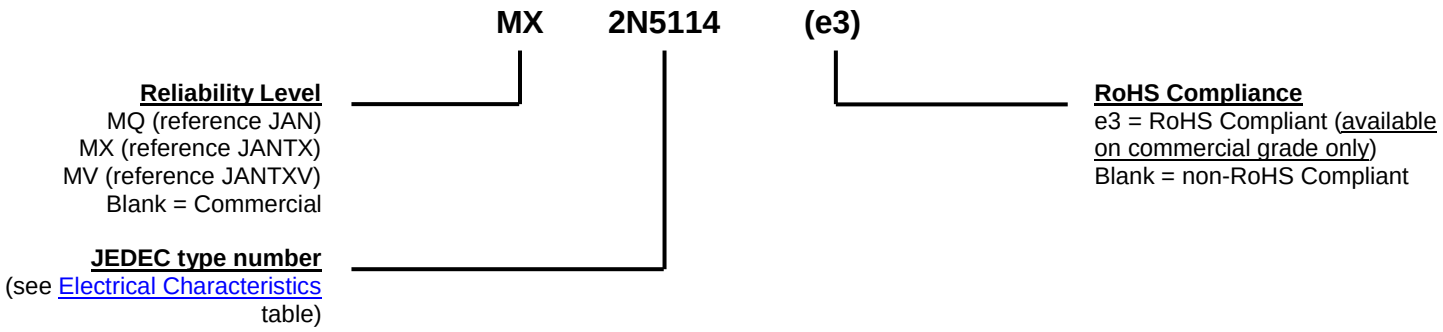
MECHANICAL and PACKAGING

- CASE: Hermetically sealed, Nickel plated Kovar Base, Nickel Cap.
- TERMINALS: Gold plate over nickel, Kovar, Solder dipped. RoHS compliant Matte/Tin plating available on commercial grade only.
- MARKING: Part Number, Data Code, Manufacturer's ID.
- WEIGHT: Approximately 0.3 grams.
- See Package Dimensions on last page.

PART NOMENCLATURE



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

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Gate-Source Breakdown Voltage V_{DS} = 0, I_G = 1.0 µA		$V_{(BR)GSS}$	30		V
Drain-Source "On" State Voltage V_{GS} = 0 V, I_D = -15 mA V_{GS} = 0 V, I_D = -7.0 mA V_{GS} = 0 V, I_D = -3.0 mA	 2N5114 2N5115 2N5116	$V_{DS(on)}$		 -1.3 -0.8 -0.6	V
Gate Reverse Current V_{DS} = 0, V_{GS} = 20 V		I_{GSS}		500	pA
Drain Current Cutoff V_{GS} = 12 V, V_{DS} = -15 V V_{GS} = 7.0 V, V_{DS} = -15 V V_{GS} = 5.0 V, V_{DS} = -15 V	 2N5114 2N5115 2N5116	$I_{D(off)}$		 -500 -500 -500	pA
Zero Gate Voltage Drain Current V_{GS} = 0, V_{DS} = -18V V_{GS} = 0, V_{DS} = -15V V_{GS} = 0, V_{DS} = -15V	 2N5114 2N5115 2N5116	I_{DSS}	 -30 -15 -5.0	 -90 -60 -25	mA
Gate-Source Cutoff V_{DS} = -15, I_D = -1.0 nA V_{DS} = -15, I_D = -1.0 nA V_{DS} = -15, I_D = -1.0 nA	 2N5114 2N5115 2N5116	$V_{GS(off)}$	 5.0 3.0 1.0	 10 6.0 4.0	V

DYNAMIC CHARACTERISTICS

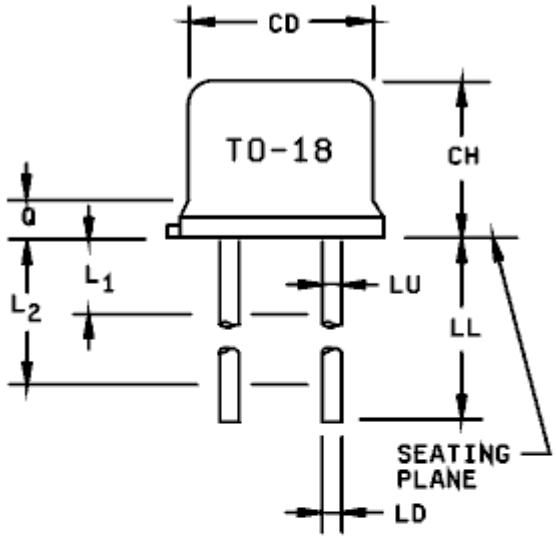
Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Small-Signal Drain-Source "On" State Resistance V_{GS} = 0, I_D = -1.0 mA	 2N5114 2N5115 2N5116	$r_{ds(on)1}$		 75 100 175	Ω
Small-Signal Drain-Source "On" State Resistance V_{GS} = 0, I_D = 0; f = 1 kHz	 2N5114 2N5115 2N5116	$r_{ds(on)2}$		 75 100 175	Ω
Small-Signal, Common-Source Short-Circuit Reverse Transfer Capacitance V_{GS} = 12 V dc, V_{DS} = 0 V_{GS} = 7.0 V dc, V_{DS} = 0 V_{GS} = 5.0 V dc, V_{DS} = 0	 2N5114 2N5115 2N5116	C_{rss}		7.0	pF
Small-Signal, Common-Source Short-Circuit Input Capacitance V_{GS} = 0, V_{DS} = -15 V, f = 1.0 MHz	2N5114, 2N5115 2N5116	C_{iss}		25 27	pF

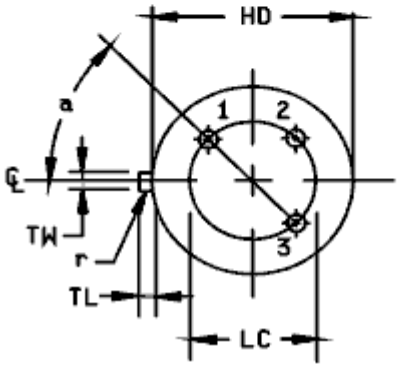
ELECTRICAL CHARACTERISTICS @ T_A = +25°C unless otherwise noted. (continued)

SWITCHING CHARACTERISTICS

Parameters / Test Conditions		Symbol	Min.	Max.	Unit
Turn-On Delay Time	2N5114 2N5115 2N5116	$T_{d(on)}$		6 10 25	ηs
Rise Time	2N5114 2N5115 2N5116	t_r		10 20 35	ηs
Turn-Off Delay Time	2N5114 2N5115 2N5116	$T_{d(off)}$		6 8 20	ηs

PACKAGE DIMENSIONS





Symbol	Dimensions				Note
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	.178	.195	4.52	4.95	
CH	.170	.210	4.32	5.33	
HD	.209	.230	5.31	5.84	
LC	.100 TP		2.54 TP		6
LD	.016	.021	0.41	0.53	7,8
LL	.500	.750	12.70	19.05	7,8
LU	.016	.019	0.41	0.48	7,8
L1		.050		1.27	7,8
L2	.250		6.35		7,8
Q		.030		0.76	5
TL	.028	.048	0.71	1.22	3,4
TW	.036	.046	0.91	1.17	
r		.010		0.25	10
α	45° TP		45° TP		6
1, 2, 9, 11, 12					

NOTES:

1. Dimension are in inches.
2. Millimeters are given for general information only.
3. Beyond r (radius) maximum, TH shall be held for a minimum length of .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. Leads at gauge plane .054 +.001 -.000 inch (1.37 +0.03 -0.00 mm) below seating plane shall be within .007 inch (0.18 mm) radius of true position (TP) at maximum material condition (MMC) relative to tab at MMC. The device may be measured by direct methods or by the gauge and gauging procedure shown in figure 2.
7. Dimension LU applies between L_1 and L_2. Dimension LD applies between L_2 and LL minimum. Diameter is uncontrolled in L_1 and beyond LL minimum.
8. All three leads.
9. The collector shall be internally connected to the case.
10. Dimension r (radius) applies to both inside corners of tab.
11. In accordance with ASME Y14.5M, diameters are equivalent to ϕx symbology.
12. Lead 1 = source, lead 2 = gate, lead 3 = drain.