

.4M.64FR10/1N816

.4M1.36FR5

.4M1.36FR2

.4M2.04FR5

.4M2.04FR2

MZ2360

MZ2361

MZ2362



**CONSTANT-VOLTAGE REFERENCE DIODES FOR
LOW-VOLTAGE APPLICATIONS**

... high-conductance silicon diodes designed as a stable forward reference source for biasing transistor amplifiers and similar applications.

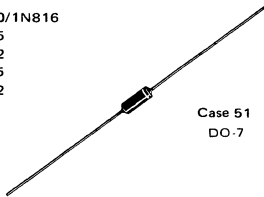
- Guaranteed Forward Voltage Range
- Choice of Package
- Temperature Effects Provided

MAXIMUM RATINGS

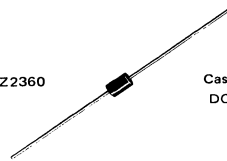
Rating	Symbol	Value	Unit
DC Power Dissipation @ $T_L = 30^\circ\text{C} \pm 3^\circ\text{C}$, Lead Length = 3/8"	P_D	400	mW
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	$^\circ\text{C}$

**FORWARD REFERENCE
DIODES
— STABISTORS —**

.4M.64FR10/1N816
.4M1.36FR5
.4M1.36FR2
.4M2.04FR5
.4M2.04FR2
MZ2361
MZ2362



Case 51
DO-7



MZ2360

Case 59
DO-41

MECHANICAL CHARACTERISTICS

Case: Choice of package, either Glass or Surmetic

Dimensions: See outline drawings

Finish: All external surfaces are corrosion resistant and leads are readily solderable and weldable

Polarity: Cathode indicated by polarity band. Cathode negative for forward reference application.

Weight: 0.2 Gram (approximate)

Mounting Positions: Any

**.4M.64FR10/1N816, .4M1.36FR5, .4M1.36FR2, .4M2.04FR5,
.4M2.04FR2, MZ2360, MZ2361, MZ2362 (continued)**

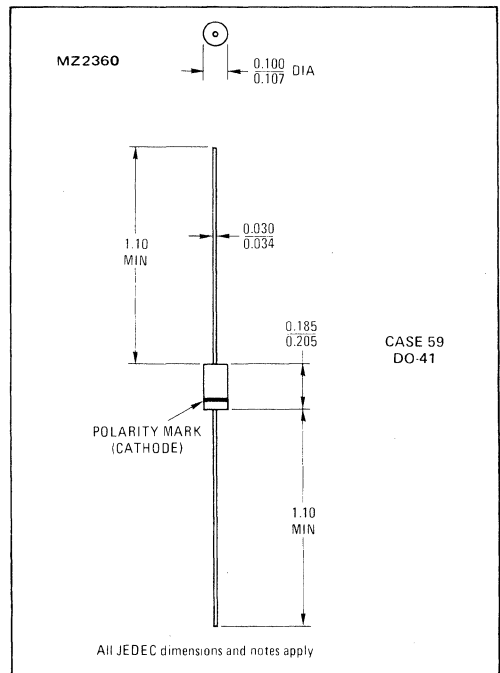
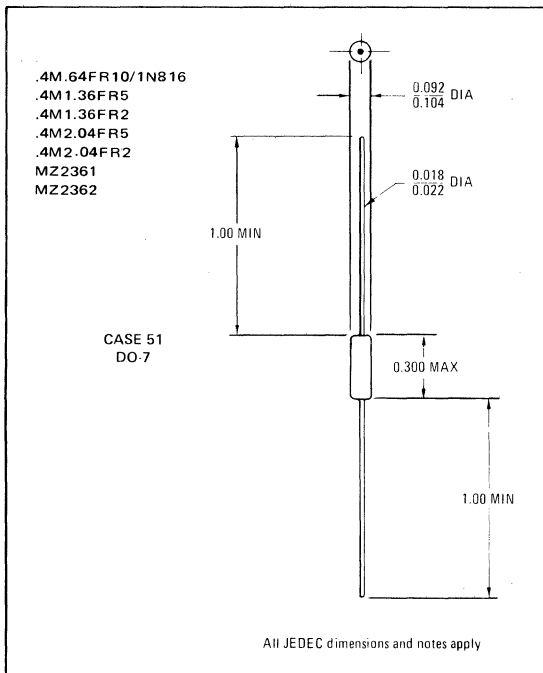
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Type Number	Forward Reference Voltage (1)		Reverse Leakage Current (Max)		Package	Case
	V_F Volts Min/Max	I_F mA	I_R μA	V_R Volts		
.4M.64FR10/ 1N816* (2)	0.58/0.70	1.0	0.1	4.0	Glass	51
.4M1.36FR5	1.29/1.43	10	0.1	4.0	Glass	51
.4M1.36FR2	1.33/1.39	10	0.1	4.0	Glass	51
.4M2.04FR5	1.94/2.14	10	0.1	4.0	Glass	51
.4M2.04FR2	2.00/2.08	10	0.1	4.0	Glass	51
MZ2360	0.63/0.71	10	10	5.0	Surmetic	59
MZ2361	1.24/1.38	10	10	5.0	Surmetic	51
MZ2362	1.90/2.10	10	10	5.0	Glass	51

*Indicates JEDEC Registered Data for 1N816

(1) Motorola guarantees the forward reference voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at $30^\circ\text{C} \pm 1^\circ\text{C}$, 3/8" from the diode body.

(2) Minimum Saturation Voltage for 1N816 = 40 V @ 100 μA .



**.4M.64FR10/1N816, .4M1.36FR5, .4M1.36FR2, .4M2.04FR5,
.4M2.04FR2, MZ2360, MZ2361, MZ2362 (continued)**

TYPICAL FORWARD VOLTAGE CHARACTERISTICS

FIGURE 1 – .4M.64FR10/1N816

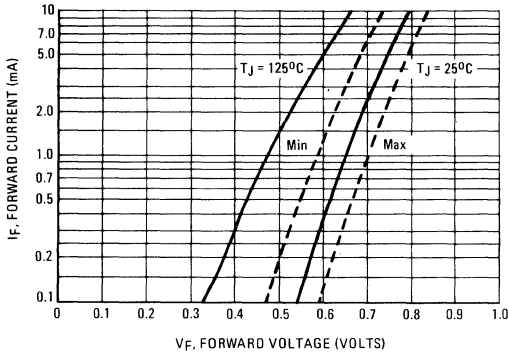


FIGURE 2 – .4M1.36FR5

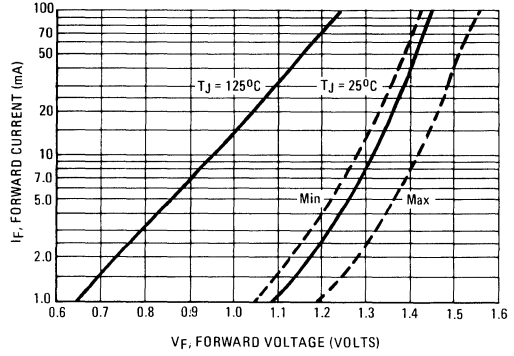


FIGURE 3 – .4M2.04FR5

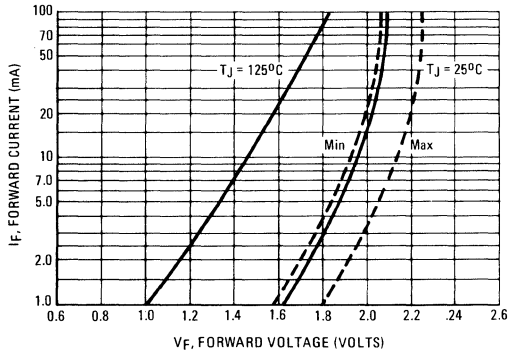


FIGURE 4 – MZ2360

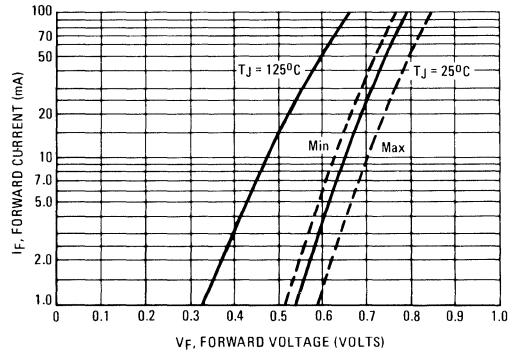


FIGURE 5 – MZ2361

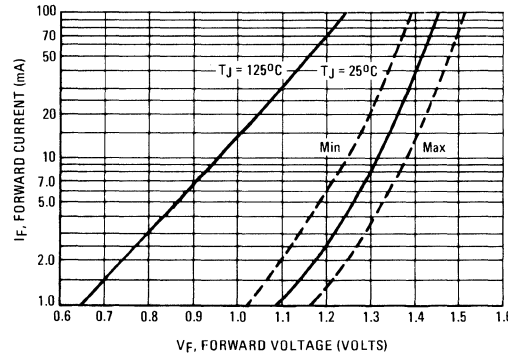
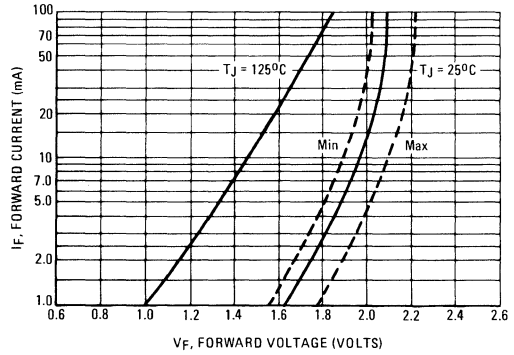


FIGURE 6 – MZ2362



**.4M.64FR10/1N816, .4M1.36FR5, .4M1.36FR2, .4M2.04FR5,
 .4M2.04FR2, MZ2360, MZ2361, MZ2362 (continued)**

TYPICAL TEMPERATURE COEFFICIENT

FIGURE 7 – .4M.64FR10/1N816

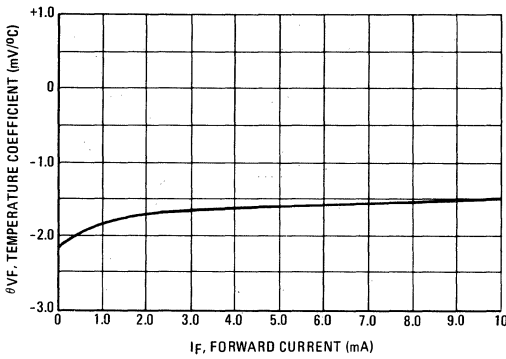


FIGURE 8 – MZ2360

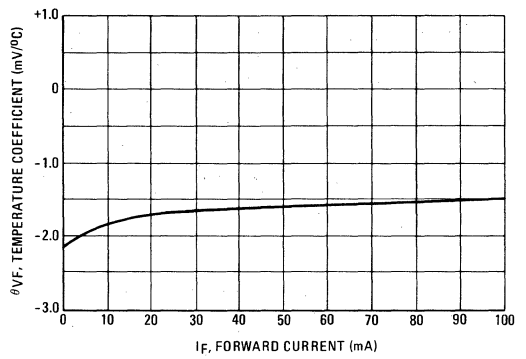


FIGURE 9 – .4M1.36FR5/MZ2361

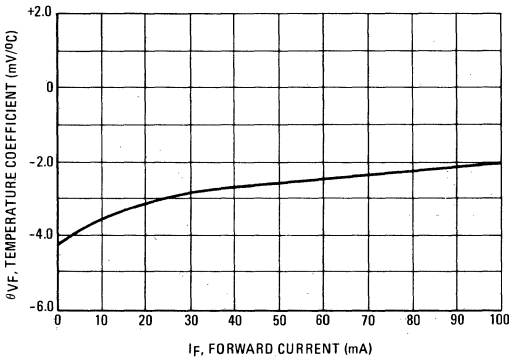


FIGURE 10 – .4M2.04FR5/MZ2362

