PLANAR TUNNEL (BACK) DIODE

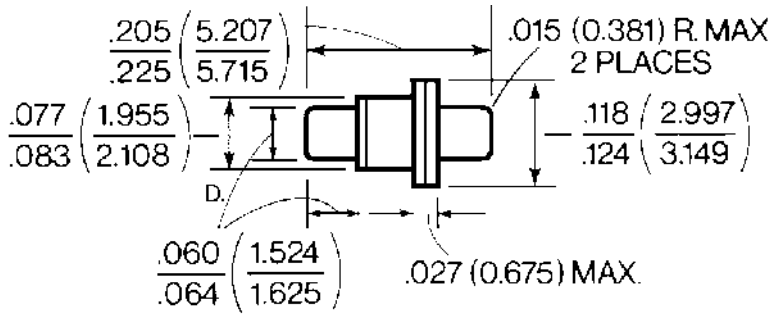
DESCRIPTION:

The **ASTD** Series of Tunnel Diodes are Optimized for Operation as Back Diode Detectors in Applications up to 18 GHz.

FEATURES INCLUDE:

- Excellent Temperature Stability
- Fast Rise / Fall Times
- Available in Die Form

PACKAGE STYLE 51



Dimensions in parenthesis are in millimeters

MAXIMUM RATINGS

I_R	10 mA
P_{DISS}	3 ERG spike
P_{DISS}	50 mW @ T_A = +60 ^{O}C
T_J	-65 to +110 ^{O}C
T_{STG}	-65 to +125 ^{O}C

ELECTRICAL CHARACTERISTICS T_C = 25 ^{O}C

SYMBOL	TEST CONDITIONS		MINIMUM	TYPICAL	MAXIMUM	UNITS
I_P		ASTD 1020	100		200	µA
		ASTD 2030	200		300	
		ASTD 3040	300		400	
		ASTD 4050	400		500	
		ASTD 5060	500		600	
V_F	I_F = 3 mA	ASTD 1020			135	mV
		ASTD 2030			130	
		ASTD 3040			125	
		ASTD 4050			120	
		ASTD 5060			110	
V_R	I_R = 500 µA		400			mV

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DYNAMIC ELECTRICAL CHARACTERISTICS T_C = 25 °C

Symbol	Test Conditions			Minimum	Typical	Maximum	Units
λ	F = 10 GHz	R_L = 10 KΩ	ASTD 1020		1,000		mV/mW
	P_{IN} = -20 dBm		ASTD 2030		750		
			ASTD 3040		500		
			ASTD 4050		275		
			ASTD 5060		250		
R_V	F = 10 GHz	R_L = 10 KΩ	ASTD 1020		180		Ω
	P_{IN} = -20 dBm		ASTD 2030		130		
			ASTD 3040		80		
			ASTD 4050		65		
			ASTD 5060		60		
R_S	I_R = 10 mA	F = 100 MHz				7.0	Ω

ORDERING INFORMATION:

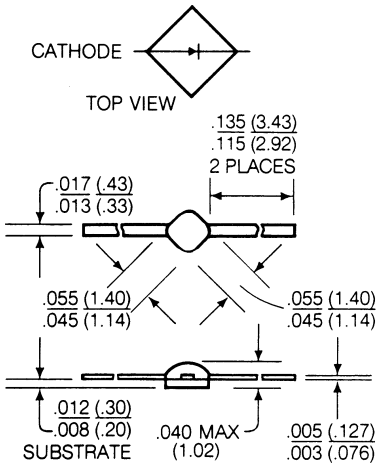
ASTD-*XXXX*-*XX*

51 = Case Style 51
820 = Case Style 820
860 = Case Style 860

1020
2030
3040
4050
5060

PLANAR TUNNEL (BACK) DIODE

PACKAGE STYLE 820



PACKAGE STYLE 860