

1N6705
1N6705R

Features

- passivated mesa structure for very low leakage currents
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed surface mount power package
- Low package inductance
- Very low thermal resistance
- Available as standard polarity (strap-to-anode, 1N6705) and reverse polarity (strap-to-cathode: 1N6705R)

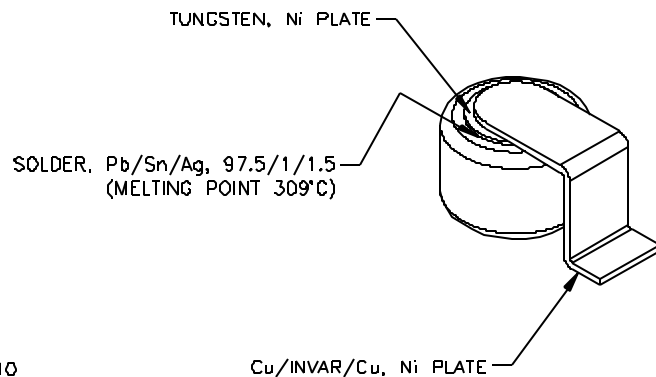
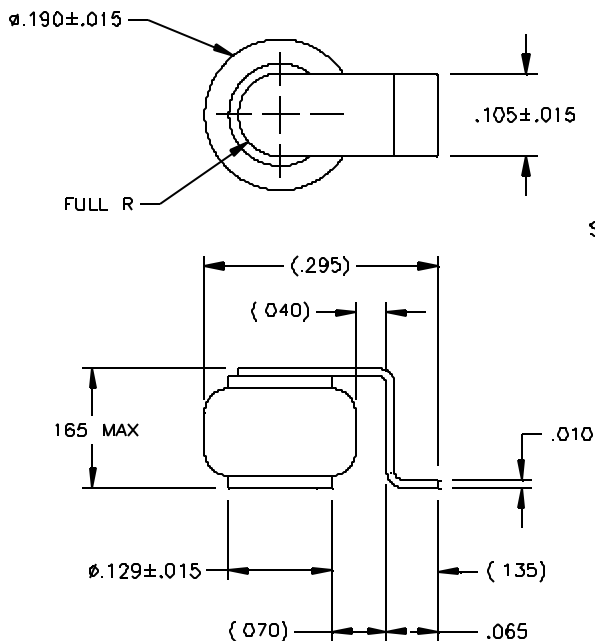
400 Volts
20 Amps
35 ns

**ULTRAFAST
 RECTIFIER**

Maximum Ratings @ 25°C (unless otherwise specified)

DESCRIPTION	SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	400	Volts
Working Peak Reverse Voltage	V_{RWM}	400	Volts
DC Blocking Voltage	V_R	400	Volts
Average Rectified Forward Current, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	20	Amps
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	I_{FSM}	100	Amps
Junction Temperature Range	T_j	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +175	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	θ_{JC}	2.0 (typ. 1.6)	$^\circ\text{C/W}$

Mechanical Outline



G-BODY (DO-217AA)

1N6705

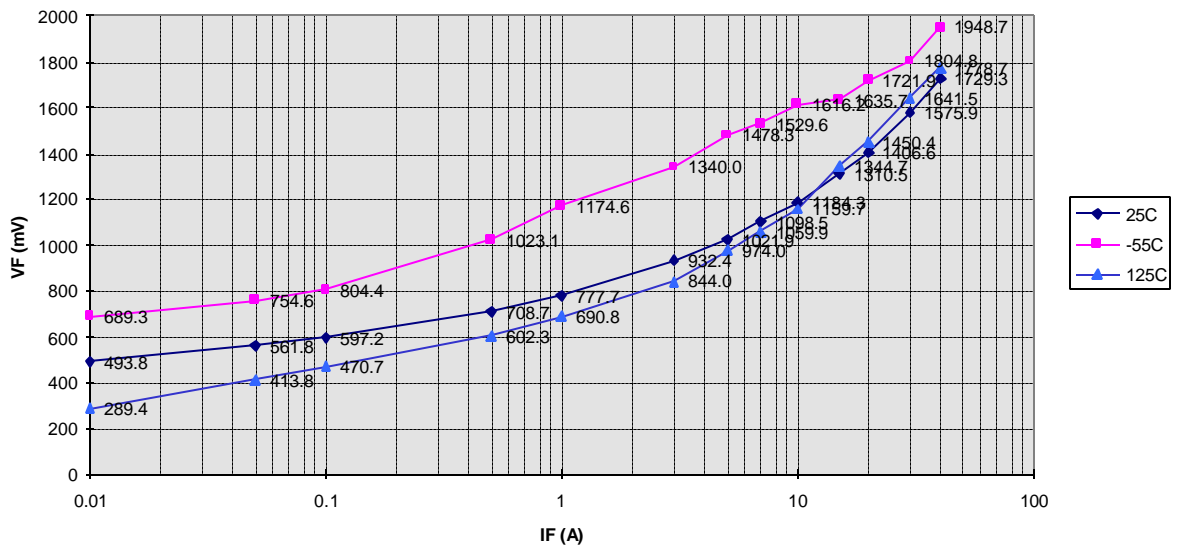
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Electrical Parameters

PRELIMINARY

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR ₂₅	VR= 400 Vdc, Tc= 25°C		0.3	5	μA
	IR ₁₂₅	VR= 400 Vdc, Tc= 125°C		60	200	μA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VF1	IF= 10 mA, Tc= 25°C		500	-	mV
	VF2	IF= 100 mA, Tc= 25°C		600	-	mV
	VF3	IF= 3 A, Tc= 25°C		950	-	mV
	VF4	IF= 5 A, Tc= 25°C		1050	1250	mV
	VF5	IF= 10 A, Tc= 25°C		1200	1400	mV
	VF6	IF= 20 A, Tc= 25°C		1400	1650	mV
	VF7	IF= 40 A, Tc= 25°C		1750	-	mV
	VF8	IF= 5 A, Tc= -55°C		1480	1700	mV
	VF9	IF= 10 A, Tc= -55°C		1625	1850	mV
	VF10	IF= 20 A, Tc= -55°C		1450	1700	mV
	VF11	IF= 5 A, Tc= 125°C		975	1200	mV
	VF12	IF= 10 A, Tc= 125°C		1160	1400	mV
	VF13	IF= 20 A, Tc= 125°C		1725	2050	mV
Junction Capacitance	Cj1	VR= 10 Vdc		50	80	pF
Breakdown Voltage	BVR	IR= 100 μA, Tc= 25°C	440	500	n/a	V
Reverse Recovery Time	trr	IF= .5 A, IR= 1 A, IRR= .25 A		25	35	ns

typical VF





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