

TECHNICAL DATA

SILICON CONTROLLED RECTIFIER

Qualified per MIL-PRF-19500/276

2N2324S

2N2324A

Devices

2N2323

2N2323S

2N2323A

2N2323AS

2N2324 2N2326

2N2326 2N2328 2N2326S 2N2328S

2N2326A 2N2328A

2N2329

2N2329S

2N2324AS 2N2326AS 2N2328AS

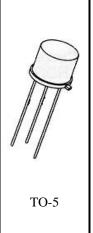
Qualified Level

JAN JANTX JANTXV

MAXIMUM RATINGS

Ratings	Sym		2N2324,S/ 2N2324A,S			2N2329,S	Unit
Reverse Voltage	V_{RM}	50	100	200	300	400	Vdc
Working Peak Reverse Voltage	V_{RM}	75	150	300	400	500	Vpk
Forward Blocking Voltage	V_{FBXM}	50 ^(3/4)	$100^{(3/4)}$	$200^{(3/4)}$	$300^{(3/4)}$	$400^{(3)}$	Vpk
Average Forward Current (1)	I_{O}	0.22				Adc	
Forward Current Surge Peak ⁽²⁾	I_{FSM}	15				Adc	
Cathode-Gate Current	$V_{KGM} \\$	6				Vpk	
Operating Temperature	T_{op}	-65 to +125			^{0}C		
Storage Junction Temp	T_{stg}	-65 to +150			^{0}C		

- This average forward current is for an ambient temperature of 80°C and 180 electrical degrees of conduction.
- Surge current is non-recurrent. The rate of rise of peak surge current shall not exceed 40 A during the first 5 µs after switching from the 'off' (blocking) to the 'on' (conducting) state. This is measured from the point where the thyristor voltage has decayed to 90% of its initial blocking value.
- 3) Gate connected to cathode through 1,000 ohm resistor.
- 4) Gate connected to cathode through 2,000 ohm resistor.



*See appendix A for package outline

ELECTRICAL CHARACTERISTICS

Characteristics		Symbol	Min.	Max.	Unit
SUBGROUP 2 TESTING					
Reverse Blocking Current					
$R_2 = 1 \text{ k}\mu$	2N2323 thru 2N2329				
	2N2323S thru 2N2329S				
$R_2 = 2 \text{ k}\mu$	2N2323A thru 2N2328A				
	2N2323AS thru 2N2328AS	I _{RBX1}	10	μAdc	
$V_R = 50 \text{ Vdc}$	2N2323, S, A, AS				
$V_R = 100 \text{ Vdc}$	2N2324, S, A, AS				
$V_R = 200 \text{ Vdc}$	2N2326, S, A, AS				
$V_R = 300 \text{ Vdc}$	2N2328, S, A, AS				
$V_R = 400 \text{ Vdc}$	2N2329, S,				

6 Lake Street, Lawrence, MA 01841

1-800-446-1158 / (978) 794-1666 / Fax: (978) 689-0803

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2N2323, A, AS, S; 2N2324, A, AS, S; 2N2326, A, AS, S; 2N2328, A, AS, S; 2N232, S JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit
Forward Blocking Current					
$R_2 = 1 k\Omega$	2N2323 thru 2N2329				
	2N2323S thru 2N2329S				
$R_2 = 2 k\Omega$	2N2323A thru 2N2328A				
	2N2323AS thru 2N2328AS	I_{FBX1}		10	μAdc
$V_R = 50 \text{ Vdc}$	2N2323, S, A, AS	1FBX1		10	μΑας
$V_R = 100 \text{ Vdc}$	2N2324, S, A, AS				
$V_R = 200 \text{ Vdc}$	2N2326, S, A, AS				
$V_R = 300 \text{ Vdc}$	2N2328, S, A, AS				
$V_R = 400 \text{ Vdc}$	2N2329, S				
Reverse Gate Current		I_{KG}		200	μAdc
$V_{KG} = 6 \text{ Vdc}$		1KG		200	μΑας
Gate Trigger Voltage and Current					
$V_2 = V_{FBX} = 6 \text{ Vdc}$; $R_L = 100 \Omega$					
$R_e = 1 k\Omega$	2N2323 thru 2N2329 and	V_{GT1}	0.35	0.80	Vdc
	2N2323S thru 2N2329S	$\mathbf{I}_{\mathrm{GT1}}$		200	μAdc
$R_e = 2 k\Omega$	2N2323A thru 2N2328A and	V_{GT1}	0.35	0.60	Vdc
	2N2323AS thru 2N2328AS	I_{GT1}		20	μAdc

SUBGROUP 4 TESTING

Exponential Rate of Voltage Rise					
$50 \Omega \le R_L \le 400 \Omega$, C = 0.1 to 1.0 μF, repetition rate = 60 pps,					
test duration = 15 seconds					
$dv/dt = 1.8 \text{ v/}\mu\text{s}, R_3 = 1 \text{ k}\Omega$	2N2323 thru 2N2329 and				
	2N2323S thru 2N2329S				
$dv/dt = 0.7 \text{ v/}\mu\text{s}, R_3 = 2 \text{ k}\Omega$	2N2323A thru 2N2328A and	3.7			Vdc
• / •	2N2323AS thru 2N2328AS	$ m V_{FBX}$			
$V_{AA} = 50 \text{ Vdc}$	2N2323, S, A, AS		47		
$V_{AA} = 100 \text{ Vdc}$	2N2324, S, A, AS		95		
$V_{AA} = 200 \text{ Vdc}$	2N2326, S, A, AS		190		
$V_{AA} = 300 \text{ Vdc}$	2N2328, S, A, AS		285		
$V_{AA} = 400 \text{ Vdc}$	2N2329, S		380		
Forward "on" Voltage					
$i_{FM} = 4a$ (pk) (pulse), pulse width = 8.5 ms, max; duty cycle = 2% max		V_{FM}		2.2	V(pk)
Holding Current					
$V_{AA} = 24 \text{ Vdc max}, I_{F1} = 100 \text{ mAdc}, I_{F2} = 10 \text{ mAdc}$					
Gate trigger source voltage = 6 Vdc,		T.			
trigger pulse width = 25 μ s min., R_2 = 330 Ω				2.0	mAdc
$R_3 = 1 k\Omega$	2N2323 thru 2N2329 and	I_{HOX}		2.0	IIIAuc
	2N2323S thru 2N2329S				
$R_3 = 2 k\Omega$	2N2323A thru 2N2328A and				
	2N2323AS thru 2N2328AS				

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