

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N681,A THRU 2N692,A

SILICON CONTROLLED RECTIFIER
25 AMPS, 25 THRU 800 VOLTS

JEDEC TO-48 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N681,A Series types are Silicon Controlled Rectifiers designed for phase control applications.

MAXIMUM RATINGS (T_C=25°C unless otherwise noted)

	2N6 81.A	2N6 82.A	2N6 83.A	2N6 84.A	2N6 85.A	2N6 86.A	2N6 87.A	2N6 88.A	2N6 89.A	2N6 90.A	2N6 91.A	2N6 92.A	UNITS
V _{DRM}	25	50	100	150	200	250	300	400	500	600	700	800	V
V _{RRM}	25	50	100	150	200	250	300	400	500	600	700	800	V
V _{RSM}	25	50	100	150	200	250	300	400	500	600	700	800	V
RMS On-State Current (T _C =70°C)							I _T (RMS)	25					A
Peak One Cycle Surge Current (60Hz)							I _{TSM}	200					A
Peak Gate Power Dissipation							P _{GM}	5.0					W
Average Gate Power Dissipation							P _{G(AV)}	0.5					W
Storage Temperature							T _{stg}	-65 to +150					°C
Operating Junction Temperature							T _J	-65 to +125					°C
Thermal Resistance, Junction to Case							θ _{JC}	1.5					°C/W

ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N681,A, 2N682, 2N683, 2N684,A)			13	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N685,A)			12	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N686,A)			11	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N687,A)			10	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N688,A)			8.0	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N689,A)			6.0	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N690,A)			5.0	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N691,A)			4.5	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C =125°C (2N692,A)			4.0	mA
I _{GT}	V _D =12V, R _L =50Ω			40	mA
V _{GT}	V _D =12V, R _L =50Ω			2.0	V
V _{TM}	I _{TM} =50A, PW=1.0ms, D.C=2.0%			2.0	V
I _H	V _D =7.0V, R _{GK} =1KΩ (2N681 thru 2N692)			100	mA
I _H	V _D =7.0V, R _{GK} =1KΩ (2N681A thru 2N692A)			50	mA
dv/dt	Rated V _{DRM} , T _C =125°C		100		V/μs
t _{on}	I _F =10A, I _G =200mA		2.0		μs
t _{off}	I _F =10A, I _G =200mA		15		μs

(See Reverse Side)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

CONTACT US

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