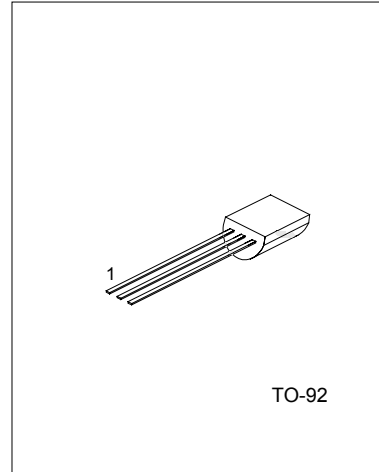


DESCRIPTION

The UTC PCR406 silicon controlled rectifiers are high performance planar diffused PNP devices. These parts are intended for low cost high volume applications.



1:CATHODE 2:GATE 3:ANODE

ABSOLUTE MAXIMUM RATINGS

PARAMETERS	SYMBOL	TEST CONDITION	RATING	UNITS
Repetitive Peak Off-State Voltage PCR406-6 PCR406-5	V <sub>DRM</sub>	T <sub>j</sub> =40 to 125°C (R <sub>GK</sub> = 1kΩ)	400 300	V
On-State Current	I <sub>T(RMS)</sub>	T <sub>c</sub> =40°C	0.8	A
Average On-State Current	I <sub>T(AV)</sub>	Half Cycle=180, T <sub>c</sub> =40°C	0.5	A
Peak Reverse Gate Voltage	V <sub>GRM</sub>	I <sub>GR</sub> =10μA	1	V
Peak Gate Current	I <sub>GM</sub>	10us Max.	0.1	A
Gate Dissipation	P <sub>G(AV)</sub>	20ms Max.	150	mW
Operating Temperature	T <sub>j</sub>		-40~125	°C
Storage Temperature	T <sub>STG</sub>		-40~125	°C
Soldering Temperature	T <sub>SLD</sub>	1.6mm from case 10s Max.	250	°C

ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Off state leakage current	I <sub>DRM</sub>	V <sub>DRM</sub> (R <sub>GK</sub> =1KΩ), T <sub>j</sub> =125°C		0.1	mA
Off state leakage current	I <sub>DRM</sub>	V <sub>DRM</sub> (R <sub>GK</sub> =1KΩ), T <sub>j</sub> =25°C		1.0	μA
On state voltage	V <sub>T</sub>	I <sub>T</sub> =0.4A I <sub>T</sub> =0.8A		1.4 2.2	V
On state threshold voltage	V <sub>T(TO)</sub>	T <sub>j</sub> =125°C		0.95	V
On state slops resistance	R <sub>t</sub>	T <sub>j</sub> =125°C		600	m
Gate trigger current	I <sub>GT</sub>	V <sub>D</sub> =7V		200	μA
Gate trigger voltage	V <sub>GT</sub>	V <sub>D</sub> =7V		0.8	V
Holding current	I <sub>H</sub>	R <sub>GK</sub> =1KΩ		5	mA
Latching current	I <sub>L</sub>	R <sub>GK</sub> =1KΩ		6	mA
Critical rate of voltage rise	DV/DT	V <sub>D</sub> =0.67*V <sub>DRM</sub> (R <sub>GK</sub> =1KΩ), T <sub>j</sub> =125°C			V/μs

# UTC PCR406

# SCR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Critical rate of current rise	DV/DT	I <sub>G</sub> =10mA, dI <sub>G</sub> /dt=0.1A/μs, T <sub>j</sub> =125°C			A/μs
Gate controlled delay time	TGD	I <sub>G</sub> =10mA, dI <sub>G</sub> /dt=0.1A/μs,		2.2	μs
Commutated turn-off time	TG	T <sub>j</sub> =85°C, V <sub>D</sub> =0.67*V <sub>DRM</sub> , V <sub>R</sub> =35V, I <sub>T</sub> =I <sub>T(AV)</sub>		200	μs

## CLASSIFICATION OF I<sub>GT</sub>

RANK	B	C	AA	AB	AC	AD
RANGE	50-100μA	100-200μA	8-15μA	15-20μA	20-25μA	25-50μA