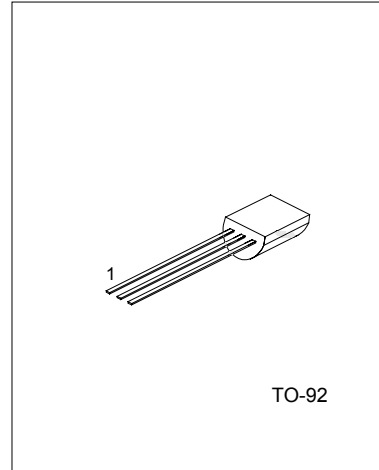


DESCRIPTION

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 _{DRM}	T _j =40 to 125°C (R _{GK} = 1kΩ)	400 300	V
On-State Current	I _{T(RMS)}	T _c =40°C	0.8	A
Average On-State Current	I _{T(AV)}	Half Cycle=180, T _c =40°C	0.5	A
Peak Reverse Gate Voltage	V _{GRM}	I _{GR} =10μA	1	V
Peak Gate Current	I _{GM}	10us Max.	0.1	A
Gate Dissipation	P _{G(AV)}	20ms Max.	150	mW
Operating Temperature	T _j		-40~125	°C
Storage Temperature	T _{STG}		-40~125	°C
Soldering Temperature	T _{SLD}	1.6mm from case 10s Max.	250	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Off state leakage current	I _{DRM}	V _{DRM} (R _{GK} =1KΩ), T _j =125°C		0.1	mA
Off state leakage current	I _{DRM}	V _{DRM} (R _{GK} =1KΩ), T _j =25°C		1.0	μA
On state voltage	V _T	I _T =0.4A I _T =0.8A		1.4 2.2	V
On state threshold voltage	V _{T(TO)}	T _j =125°C		0.95	V
On state slope resistance	R _t	T _j =125°C		600	m
Gate trigger current	I _{GT}	V _D =7V		200	μA
Gate trigger voltage	V _{GT}	V _D =7V		0.8	V
Holding current	I _H	R _{GK} =1KΩ		5	mA
Latching current	I _L	R _{GK} =1KΩ		6	mA
Critical rate of voltage rise	DV/DT	V _D =0.67*V _{DRM} (R _{GK} =1KΩ), T _j =125°C			V/μs

UTC PCR406

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Critical rate of current rise	DV/DT	I _G =10mA, dI _G /dt=0.1A/μs, T _j =125°C			A/μs
Gate controlled delay time	TGD	I _G =10mA, dI _G /dt=0.1A/μs,		2.2	μs
Commutated turn-off time	TG	T _j =85°C, V _D =0.67*V _{DRM} , V _R =35V, I _T =I _{T(AV)}		200	μs

CLASSIFICATION OF I_{GT}

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

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