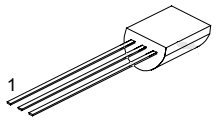
DESCRIPTION

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



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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}	Tj=40 to 125°C (R_{GK} =1kΩ)	 400 300	V
On-State Current	IT(RMS)	Tc=40°C	0.8	A
Average On-State Current	IT(AV)	Half Cycle=180, Tc=40°C	0.5	A
Peak Reverse Gate Voltage	V_{GRM}	IGR=10uA	1	V
Peak Gate Current	IGM	10us Max.	0.1	A
Gate Dissipation	PG(AV)	20ms Max.	150	mW
Operating Temperature	Tj		-40~125	°C
Storage Temperature	T_{STG}		-40~125	°C
Soldering Temperature	T_{SLD}	1.6mm from case 10s Max.	250	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Off state leakage current	IDRM	$V_{DRM(R_{GK}}$=1KΩ), Tj=125°C		0.1	mA
Off state leakage current	IDRM	$V_{DRM(R_{GK}}$=1KΩ), Tj=25°C		1.0	μA
On state voltage	VT	IT=0.4A IT=0.8A		1.4 2.2	V
On state threshold voltage	VT(TO)	Tj=125°C		0.95	V
On state slops resistance	Rt	Tj=125°C		600	m
Gate trigger current	IGT	VD=7V		200	μA
Gate trigger voltage	VGT	VD=7V		0.8	V
Holding current	IH	R_{GK}=1KΩ		5	mA
Latching current	IL	R_{GK}=1KΩ		6	mA
Critical rate of voltage rise	DV/DT	VD=0.67*VDRM(R_{GK}=1KΩ), Tj=125°C			V/μs

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Critical rate of current rise	DV/DT	IG=10mA, dIG/dt=0.1A/μs, Tj=125°C			A/μs
Gate controlled delay time	TGD	IG=10mA, dIG/dt=0.1A/μs,		2.2	μs
Commutated turn-off time	TG	Tj=85°C, VD=0.67*VDRM, VR=35V, IT=IT(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