



life.augmented

High temperature SCR

Division Product Marketing

Discrete & Filter Division

Analog, Power & Discrete, MEMS & Sensors

High Temperature SCR Application

- TV / Games station SMPS
- Washing machine
- Fridge
- Air Conditioner
- Cordless V/C



Automotive



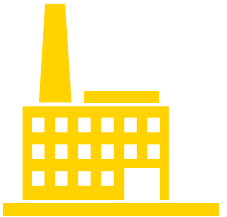
- Voltage regulator
- EV charger
- Overvoltage protection



Industrial



- SMPS
- AC Motor control
- HVAC
- Water Heater
- Lighting



Consumer



High Temperature Thyristors (SCR)



	Part number	I_{TRMS} (A)	I_{GT} (mA)	dV/dt @ 150°C (V/μs)	T^o_j (°C)	I_{TSM} (A)	TO-220	TO-220 ins	TOP3 ins	TO-247 HC	DPAK	D2PAK	D3PAK	H2PAK	HU3PAK	ACEPAK	Grade
600 V	TN1205H-6	12	2 to 5	100	150	120	●					●					
	TN1605H-6	16	6	200	150	140	●					●					
	TN1610H-6	16	10	1000	150	140	●	●									
	TN2010H-6	20	10	400	150	180	●	●				●					
	TN2015H-6	20	15	750	150	180	●	●									
	TN3015H-6	30	15	1000	150	270	●	●				●					
	TN4015H-6	40	15	500	150	360	●	●				●					
800 V	TN5015H-6	50	15	500	150	450	●	●				●					
	TN1605H-8	16	5 to 8	500	150	160	●	●			●	●					
	TN4035HA-8	40	35	1500	150	300						●					AEC
1200 V	TM8050H-8	80	50	1000	150	670				●			●				
	TN3050H-12	30	50	1000	150	300				●		●					AEC
	TN3050HP-12	30	50	1000	150	300									●		AEC
	TN4050-12	40	50		125				●								
	TN4050HP-12	40	50	1500	150	400								●	●		AEC
	TN4050HA-12	40	50	1500	150	400						●					AEC
	TN5050H-12	50	50	1500	150				●	●							
	TN6050-12	60	50		125				●	●							
	TN6050HP-12	60	50	1000	150	600				●							AEC
	TN8050H-12	80	50		150				●	●							

THROUGH HOLE



SURFACE MOUNT



TOP SIDE COOLING





High Temperature SCRs answer Challenges

CHALLENGE

SOLUTION

BENEFIT

High thermal constraint

150 °C of junction temperature

Improved Reliability

Power density

150 °C of junction temperature

Application compactness

Remove mechanical switch

AC/DC rectification with SCR

Compliance with RoHS with
lifetime savings

Reliable system

Strong ITSM

Application Inrush current
management

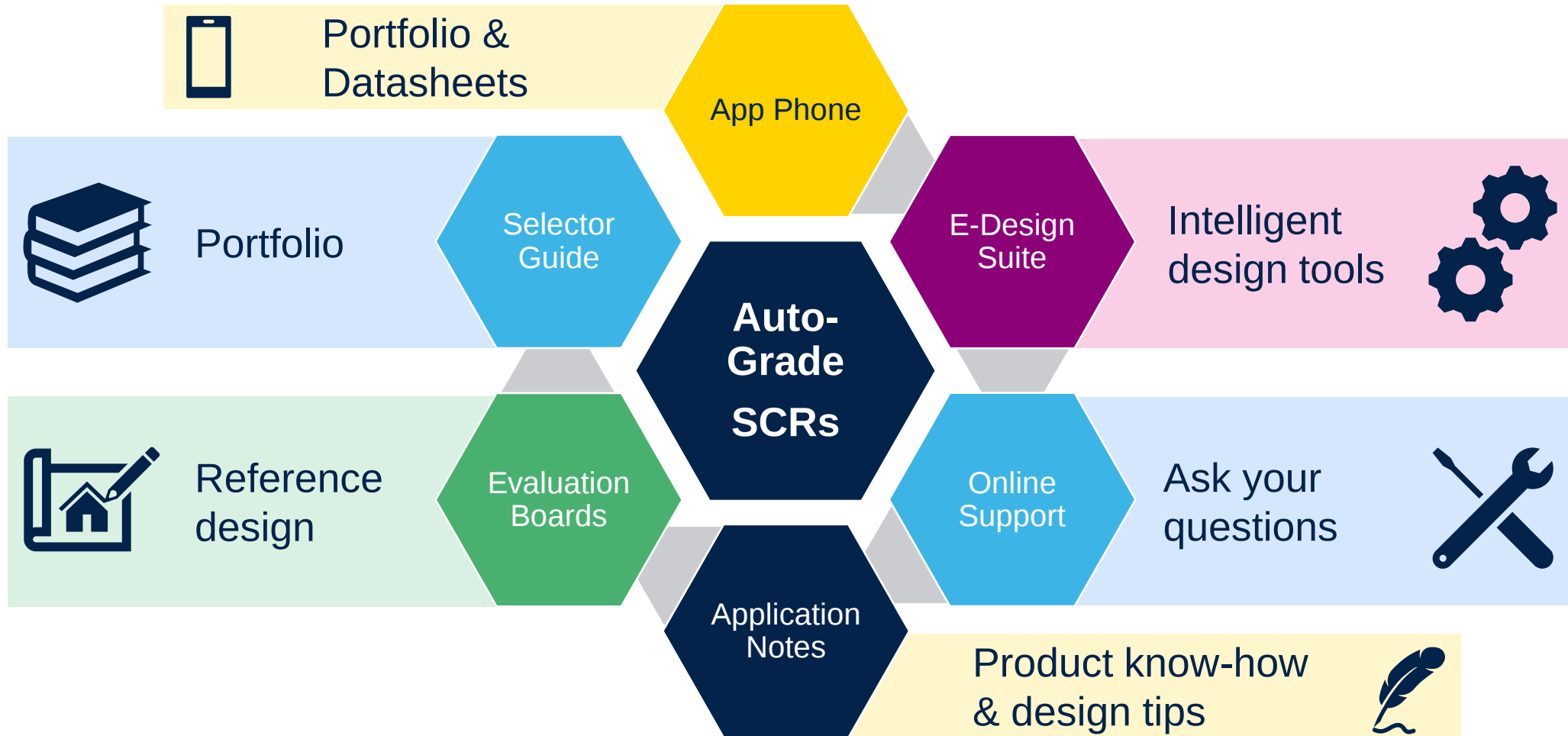
Safe in high EMI environment

$dV/dt = 1 \text{ kV}/\mu\text{s}$,
 $dI/dt = 100\text{A}/\mu\text{s}$, $V_{\text{DSM}} = 700 \text{ V}$

Eases EMI std compliance
IEC61000-4-4, IEC61000-4-5



Want to know more ?



Thank you