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General Information

Parameter	Value
Part Number	S9S12DG12F1CPVE
Description	16-bit MCU, S12 core, 128KB Flash, 25MHz, -40/+85degC, Automotive Qualified, QFP 112
Product Line	G9FSDG1K
PTI	JCJD
Material Type	Tested Packaged Device
Life Cycle Description (code)	PRODUCT MATURITY/SATURATION
Status	Active
Application/Qualification Tier	AUTO; >=10 YEARS APPLICATION LIFE




Package Information

Parameter	Value
Package Type and Termination Count	LQFP 112
Package Description and Mechanical Drawing	LQFP 112 20*20*1.4P0.65
Device Weight(g)	1.27830
Package Material	Plastic
Mounting Style	Surface Mount
Package Length (nominal)(mm)	20.000
Package Width (nominal)(mm)	20.000
Package Thickness (nominal)(mm)	1.000
Maximum Height Above Board(mm)	1.600
Tape & Reel	No

Environmental and Compliance Information

Parameter	Value
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Pb-Free

RoHS Compliant	
Halogen Free	Yes
Material Composition Declaration (MCD)	Download MCD Report  Download MCD Report 
RoHS Certificate of Analysis (CoA)	Download RoHS CoA Report
2nd Level Interconnect	e3
Moisture Sensitivity Level (MSL)	3
Floor Life	168 HOURS
Peak Package Body Temperature (PPT)(°C)	260
Maximum Time at Peak Temperature (s)	40
Number of Reflow Cycles	3
REACH SVHC	Freescale REACH Statement
UL94 (plastics flammability test)	V0: Burning stops within 10 seconds on a vertical specimen; no drips allowed

Manufacturing Information

Parameter	Value
Micron Size(μm)	.25

Ordering Information

Parameter	Value
Minimum Package Quantity (MPQ)	300
MPQ Container	BRICK
Exempt from Minimum Delivery Value	No
Preferred Order Quantity (POQ)	600
POQ Container	BOX
Leadtime (weeks)	12
Export Control Classification Number (US)	EAR99
Harmonized Tariff (US) Disclaimer	8542.31.0000
CCATS Document	-
ENC Status	-
Other Trade Compliance Documents	
Budgetary Price excluding tax(US\$) Change Currency	1 @ US\$10.76 each
Device Sample Availability	13 Dec 2005
Device Production Availability	13 Dec 2005
Order	

Product/Process Change Notice (PCN)

Number	Type	Title	Issue Date	Effectivity Date
16253	Product Change Notice	0.25um ATMC and TSMCFAB3/11 KLM QFP Copper Wire and Leadframe Flag Conversion Qualification	09 Jun 2014	09 Dec 2014
14393A	Update Notification	9S12D256, 9S12DX12, AND 9S12XD64 MANUFACTURING IN TSMC3 IN TAIWAN	05 Nov 2010	28 Feb 2011
14393	Product Change Notice	9S12D256, 9S12Dx12, and 9S12xD64 manufacturing in TSMC3 in Taiwan	22 Oct 2010	11 May 2011
12298	Product Change Notice	TSPG MCD16 9S12DX128 ROOM TEST REMOVAL	12 Sep 2006	04 Sep 2006

Operating Characteristics

Parameter	Value
ADC	8-ch. 10-bit
ADC (bit)	10
ADC (ch)	8
Additional Features	COP Internal Voltage Regulator PLL
Ambient Operating Temperature (Min-Max) (°C)	-40 to 85
Bus Frequency (Max) (MHz)	25
CAN	2
Core: Type	HCS12
EEPROM (KB)	2
GPIOs	91
I2C	1
Internal Flash (KB)	128
Internal RAM (KB)	8
PWM	16-ch. 8-bit
PWM (bit)	4 8
PWM (ch)	8 16
Sample Exception Availability	N
SCI	2
SPI	2

Reliability Data Lookup